



American Forestry

VOLUME 28

MAY, 1922

NUMBER 341

NATIONAL FOREST TRIPS

✧ ✧

FIGHTING AVALANCHES IN THE
PYRENEES

✧ ✧

TREE SEEDS FOR EUROPE

✧ ✧

SUMMER BIRDS AND FLOWERS

✧ ✧

FIFTY YEARS OF ARBOR DAYS

✧ ✧

OUR VANISHING WILD FLOWERS

The American Forestry Association

Washington, D. C.

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IT IS INDEPENDENT, has no official connection with any Federal or State department or policy, and is devoted to a public service conducive to national prosperity.

IT ASSERTS THAT forestry means the propagation and care of forests for the production of timber as a crop; protection of watershed; utilization of non-agricultural soil; use of forests for public recreation.

IT DECLARES THAT FORESTRY is of immense importance to the people, that the census of 1919 shows our forests annually supply over one and a quarter billion dollars' worth of products;

employ 725,000 people; pay \$207,000,000 in wages; cover 200,000,000 acres unsuited for agriculture; regulate the distribution of water; prevent erosion of lands; and are essential to the beauty of the country and the health of the nation.

IT RECOGNIZES THAT forestry is an industry limited by economic conditions, that private owners should be aided and encouraged by investigations, demonstrations, and educational work, since they cannot be expected to practice forestry at a financial loss; that Federal and State governments should undertake scientific forestry upon National and State forest reserves for the benefit of the public.

IT WILL DEVOTE its influence and educational facilities to the development of public thought and knowledge along these practical lines.

It Will Support These Policies

National and State Forests under Federal and State Ownership, administration and management, respectively; adequate appropriations for their care and management; Federal co-operation with the State, especially in forest fire protection.

State activity by acquirement of forest lands; organization for fire protection; encouragement of forest planting by communal and private owners, non-political departmentally independent forest organization, with liberal appropriations for these purposes.

Forest Fire Protection by Federal, State and fire protective agencies, and encouragement and extension individually and by co-operation; without adequate fire protection all other measures for forest crop production will fail.

Forest Planting by Federal and State governments and long-lived corporations and acquirement of waste lands for this purpose, and also planting by private owners, where profitable, and encouragement of natural regeneration.

Forest Taxation Reforms removing unjust burdens from owners of growing timber.

Closer Utilization in logging and manufacturing without loss to owners; aid to lumbermen in achieving this.

Cutting of Mature Timber where and as the domestic market demands it except on areas maintained for park or scenic purposes, and compensation of forest owners for loss suffered through protection of watersheds, or on behalf of any public interest.

Equal protection to the lumber industry and to public interests in legislation affecting private timberland operations, recognizing that lumbering is as legitimate and necessary as the forests themselves.

Classification by experts of lands best suited for farming and those best suited for forestry; and liberal National and State appropriations for this work.

AMERICAN FORESTRY

THE MAGAZINE OF THE AMERICAN FORESTRY ASSOCIATION

WASHINGTON, D. C.

PERCIVAL SHELDON RIDSDALE, Editor

L. M. CROMELIN, Assistant Editor

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CONTENTS

Vol. 28, No. 341

FIGHTING AVALANCHES IN THE PYRENEES—By Arthur Newton Pack.....	259
With seven illustrations.	
APPRECIATION OF DR. ROTHROCK.....	262
FOREST RECREATION DEPARTMENT: TO THE GREEN TREE FRATERNITY—	
By Arthur H. Carhart	263
With one illustration.	
THE GREEN INN—Poem by Theodosia Garrison.....	264
CURIOUS GLACIERS AND CRAGGY PEAKS—By D. K. Swan.....	264
With one illustration.	
BY AUTO, RAIL, HORSE OR CANOE—By H. N. Wheeler.....	266
With two illustrations.	
RIDING THE TIDE—Poem by James Edward Hungerford.....	266
"A FRIEND TO MAN"—By Sam Walter Foss.....	267
SUNSHINE PLAYLAND—By Joseph C. Kircher.....	268
With two illustrations.	
GRAND TETON TO GRAND CANYON—By James E. Scott	269
With two illustrations.	
THE CALL OF CALIFORNIA'S FORESTS—By L. A. Barrett	270
With two illustrations.	
CAVES, CRAGS AND TRAILS—By John D. Guthrie.....	271
With three illustrations.	
FROM MAINE TO FLORIDA—By Thomas H. Gill.....	273
With one illustration.	
ALASKA—THE ALLURING—By John D. Guthrie.....	273
With four illustrations.	
THE END OF THE STAGE COACH DAYS—Poem by Earl H. Emmons	275
EDITORIAL	276
FIFTY YEARS OF ARBOR DAYS.....	279
With six illustrations.	
BIRDS AND FLOWERS OF EARLY SUMMER—By R. W. Shufeldt.....	283
With ten illustrations.	
THE WORK OF THE FORESTER	290
100,000,000 TREE SEEDS FOR FRANCE AND GREAT BRITAIN.....	291
With one illustration.	
OUR VANISHING WILD FLOWERS—By Winthrop Packard	293
With fourteen illustrations.	
THE AMERICAN TREE—Poem by Marta Scott Conser.....	299
A NEW CHINQUAPIN—By George B. Sudworth.....	300
With one illustration.	
FORESTRY EDITORIAL DIGEST.....	302
WHICH SHALL IT BE?.....	304
CANADIAN DEPARTMENT—By Ellwood Wilson.....	306
BOOK REVIEWS	308
PRUNING OF SHRUBS.....	316
WILL REFORESTATION PAY?—By W. H. Johnson.....	317

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THE OBLIGATIONS THAT GO WITH PRE-EMINENCE. (I)

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"FROM A LATH TO BRIDGE TIMBERS, SPECIFY BOGALUSA TRADE MARKED PINE—AND REST EASY."

AMERICAN FORESTRY

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FIGHTING AVALANCHES IN THE PYRENEES

By Arthur Newton Pack

Special Correspondent of the American Forestry Association

EARLY last summer mountain torrents following a cloud burst spread disaster throughout Colorado, while in the early fall saw mills, shingle mills and large numbers of dwellings in British Columbia were swept away; and these are but two of many similar catastrophes which have recently occurred. The role of the

In the European Alps and Pyrenees, however, the French and Swiss governments place implicit faith in afforestation as a protection and a remedy. There, the value of the mountain regions as a playground and health resort for the people is paramount, and if an avalanche sweeps down some spring to wipe out the smallest cure village which is then preparing for the influx of summer guests, it immediately becomes a matter of grave concern to the National Forestry Bureau.

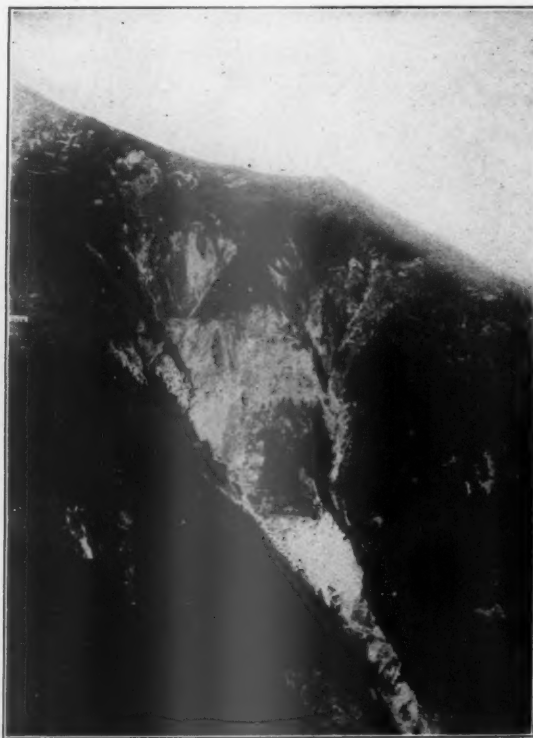
Nestled in a beautiful mountain valley only a few miles from one of those storied, robber-infested passes leading from France to Spain, lies the famous resort of Bagnères-Luchon, visited every summer not only by the French, but by travelers of all nations. Back in the year 1875, a terrible avalanche gathered up among the snows of the bordering mountains and swept down across the little



THE CRADLE OF AN AVALANCHE

Up near the timber line is where the relentlessly sliding snows must be dealt with. Several stone barrages and preliminary plantings are here shown.

forests as a protection against landslides and floods may well be a much argued subject, but it was undoubtedly true in regard to the British Columbia flood that heavy clearing of land by the logging companies, followed by repeated fires, did add materially to the overwhelming suddenness of the disaster.



WHERE TREE PLANTING IS HAZARDOUS

In order to plant the seedlings, sometimes a man was lowered from above on a rope ladder, or a human chain was organized. At the extreme left is the little hut occupied by the workmen.

river above the village, so that for a week or more the whole valley was dammed. Then the flood broke, sweeping down upon the town and carrying destruction in its path. No sooner had the waters subsided than the French National Bureau of Waters and Forests got to work. Beginning part way up the slope, they built several great stone dams across the path of the landslide to hold in check the continued descent of loose shale and rock carried by the torrents, and as each waterfall, thus created, began to dangerously undermine the foundation of the dam, a series of lower intermediate barrages had to be added. Only then was the first real headway won and opportunity given to pave a sort of permanent stream bed through the great piles of silt below. Huge four-foot blocks of stone set on end were used for

the purpose. All this, however, was simply in the nature of preliminary work to make it safe to get at the sources

of trouble, the continually eroding sides of the scar. There are found in all high mountain regions several varieties of extremely tough rooted grass. The mountain climber soon learns to know that a good hand grip on a tuft of this growth is sufficient to lit him even over a dangerous ledge. Accordingly, the Department of Waters and Forests figured that if this grass could be dug up and transplanted in rows or cordons across the dangerous spots, the surface soil might be temporarily fixed. Their expectations were well justified. To be sure, any

great volume of material from above would sweep this weak defense along with it, but fortunately only a few such accidents occurred. A large supply of tough rooted



ONE OF THE BENEFITS OF AFFORESTATION

The victory over the landslide has not only resulted in the saving of many lives and much property, but has made possible extensive hydro-electric developments. This electric cog railway up among the peaks leads to a new resort from which may be had one of the finest views in all the Pyrenees.



WHERE DEVASTATION REIGNED SUPREME

First was the bare and ugly slide—then cordons of grass supplemented and held by birch and alder, then Nature's gradual healing and finishing of the protective work. Up above, where the shifting snows gather for a tremendous rush into the valley, the young trees serve as a natural break.

tree and bush seedlings were also gathered to strengthen the cordons.

Whenever a given spot of soil and rock had been thus temporarily anchored, there began the hazardous occupation of tree planting. Seldom has the planting of trees been carried on under such unfavorable circumstances. Sometimes man and seedlings were lowered from above on a rope ladder, or a human chain so well known to Alpine climbers, was organized. It was indeed a testimonial to the grit of the French laborers that the work was ever accomplished at all. The species of trees used were chosen not upon the basis of any future commercial value of the wood, but primarily for rapidity of growth, and ability to send out a mass of tough interlacing roots. The foresters took lessons from Nature, selecting those trees which are most often found naturally sprouting upon land slide scars; and just as in this

accommodation was swept away by the spring slides. Once, even, a whole gang of men who had been sent a little too early to the scene of action lost their lives. As the zone of operations progressed to the higher levels, it was impossible for the men to go to and from their work, but they lived in shacks upon the edge of the scar, and subsisted on supplies brought in, either by mountain pony or upon their own backs.

Gradually, the work progressed to the very upper levels, and the fight became directed not against water erosion and loose earth, but against the snow itself, which is the beginning of all trouble. Numberless little stone benches were erected with a sort of hollow behind them, while on either side, large clumps of spruce, mountain pine, larch and other sub-Alpine species were introduced. This work began at an elevation of some two thousand feet above the valley, and was continued to the highest levels where a timber line could be established.

The really serious problem came in getting seedlings properly acclimated to the high altitude. Those grown in nurseries in the lower valleys were found to be too far progressed in the spring season for introduction to the rigorous climate



BEFORE AND AFTER

Two views taken of the same spot; the first taken in 1887, and the second in 1921. Note how the larch and spruce have almost completely won back the dangerous as well as valueless waste.



BEATEN AT LAST

The forest has grown up to cover nearly the whole of the giant scar and insure against a repetition of the disaster. The planted forest has won out, and is now rapidly growing into a valuable stand of timber.

country the willow, birch and alder became favorites. Later, when these had fulfilled their purpose and overcome the danger from slides, more valuable species could be introduced. In fact, all the cutting on steep mountain slopes in France is regulated on the selective system to discourage the growth of inordinately large specimens. Half a dozen medium-sized trees close together are a much more effective protection for the soil than a single forest giant. During the winter, all operations were suspended, but time after time the little stone hut the men had built for their summer

above. A scheme had to be devised to winter the seedlings part way up, or to artificially retard them. The best results were obtained by a combination of these methods, and transplanting the year before their permanent use, to high altitude nurseries near the scene of operations. Every spring there were found to be heavy casualties in the planting of the summer before, while nearly all the young trees pointed their branches toward the valley in the position to which they had been dragged by the relentless snow. But, in spite of handicaps, the work progressed, and today a healthy forest of many acres crowns the former danger zone.

Very little had to be done to the mud delta at the bottom.

Once the slides were stopped, Nature promptly reclaimed it, and at one point a forest of spruce, now eight to ten inches in diameter, covers the former devastation. Four or five million francs have been expended by the government in all, and although the work has cost lives as well as money, it has not only resulted in the saving of many lives and much property, but has made possible extensive hydro-electric developments throughout the valley. In place of terrific floods alternating with dry stream beds, a fairly even flow of water, unsupplemented by reservoirs, now furnishes light and power for the town. With further control of the mountain torrents, the development is soon to be extended and not only the



AN INNOCENT STREAM BUT IT MAY BECOME A RAGING TORRENT

The construction of a succession of tiny barrages prevents the destructive work of the spring floods which were formerly responsible for heavy losses of earlier plantings.

branch railroad to Luchon but also the main line from Marseilles to Biarritz across the entire southern portion of France will be electrified. The benefits of afforestation in the high mountains are felt, too, in another way, in that the upper grassy meadows, so rich in food for cattle and sheep, are made safe for large scale exploitation. The Chief of the Department of Waters and Forests for this district has made a special study of mountain grasses, and his department is doing a great service to the farmers of France. The time is coming when forestry in America, too, will be enabled to play an even larger part in the development of our country, and it is more than likely that our present Congress will be enabled to pass a forestry bill which will be the first step.

AN APPRECIATION OF DR. ROTHROCK

The resignation of Dr. J. T. Rothrock as a member of the Pennsylvania State Forest Commission has been followed by numerous tributes to his great achievements in forestry and the gratifying results of his devotion to the cause.

Governor Sproul, of Pennsylvania, in accepting the resignation wrote:

"Knowing your great interest in the subject and in the Department, which is largely the result of your own far-sighted policies and devoted service, I can but appreciate that the reasons which have actuated you in your decision to retire from the Commission are imperative and compelling.

"Under the circumstances, therefore, I shall accept your resignation, but I beg you to accept my congratulations upon the great service which you have rendered the Commonwealth during your long and useful life.

"Trusting that you may be spared for many years in good health and contentment, I am, with sincere regards."

The members of the State Forest Commission passed resolutions upon Dr. Rothrock's retirement which said:

"Resolved, that the Pennsylvania State Forest Commission, although knowing well that Dr. Rothrock long ago earned a just reward of peace and quiet found in the calmer sphere of home life, is yet affected with a deep sense of regret and sorrow because of his retirement from public service. His real service in the cause of forest conservation is shown by his devotion to forestry for almost half a century. His vision and courage led him to become an earnest advocate, when others ridiculed, belittled, remained silent, or retreated. His unbounded enthusiasm, his prophetic vision, his keen intellect, his unquestionable integrity, and his open heart are responsible for much of the progress that forestry has made.

Resolved, that the establishment of the Pennsylvania Department of Forestry and most of its accomplishments are directly attributed to the prophetic vision, sound judgment, untiring labors, and generous heart of Dr. Joseph Trimble Rothrock—It was he who laid the foundation of the Department and fashioned the framework of the present superstructure. He leaves to his successors and to the Commonwealth a heritage of service and devotion that is beyond our power to estimate adequately and appreciate fully. Endless benefits will flow forth from his life of public service, and faces that have not seen him will bless him. His life of public service will stand as a worthy example to the youth of our land. His achievements are comparable only to the man himself—upright citizen, unselfish public servant, distinguished botanist, prominent physician, brave soldier, fearless explorer, Father of Pennsylvania Forestry, cultured gentleman, faithful counsellor, loved and devoted friend."

FOREST RECREATION DEPARTMENT

Arthur H. Carhart, Editor

To the Green Tree Fraternity

VACATION time is coming! The smudgy buds on the street trees, the birds, in spite of their grimy dress soiled by the smoke of the city, tell of it,—it is in the air. The technical diagnostician might say that these are spring fever symptoms, but all know that it is the call to the open places beginning to exert itself and that it

not. The rushing babble of the brook where it gurgles over the stony stream-bed, the swish of the truant breeze through the bushes and grasses, the smashing roar of the thunder god are our true mother tongue. The thousands and thousands of years our ancestors spent in the open have come to us in the call of the outdoors as a

There is a tendency to think of outdoor beauty as being present only where nature is undisturbed. There has grown up a widespread cult imbued with the idea that we should "leave Nature alone." It is founded no doubt on the practices of the past, for forests were stripped from the slopes, unsightly cars wrought by industry, and beauty dissipated.

But forestry need not be excluded from our great play places to insure natural beauty. All will agree that a sturdy young tree is more pleasant to behold than a rotting, over-mature veteran. Forestry utilizes the veterans and brings in young husky trees to fill their places.

This policy exists in National Forests. Their beauty is unsurpassed—and commercial cutting is allowed in them. Proper restrictions are necessary and rational conservation policies must be followed to bring this about, but it can be and is being done.

Their beauty calls to all lovers of the outdoors. They belong to the people. The recreational use is the only direct, universal, personal use we can make of them. They invite you to come to them for your vacation this year.—Editor.

will culminate in a trip into the hills, along a tree-bordered stream, or in automobile over the broad highways.

Mother Nature calls to her truant child, man. The shadowland, where tall, arched trees let little darts of sunshine through to dapple the forest floor, is a part of our being. Stone walls, steel girders, or tiled floors are

heritage. We must heed it. We return to nature to get inspiration, better health and relief from all of the ills that our artificial surroundings breed.

Right now many are looking forward to a vacation time in the open. Those who are not doing this of their own volition are subconsciously dreaming of places



IN THE SAWTOOTH

Timbered slopes, jagged peaks, clear lakes and big fish await the traveler in this National Forest in Idaho. Would you seek further for a better spot than this for your vacation camp? It is useless.

where the clean wind rushes over spacious prairies, or where it playfully tosses pine boughs and roars through deep canyons. To all comes the question of where to go.

Do you seek a camp in the wilds reached by pack trip, or is it a picnic in woody glen you will prefer? Are you already sniffing the smell of the crisp bacon as it sizzles over the fire in the morn? Does the smell of "coffee in the woods at dawn" carried on the breeze that fans your cheek come to your nostrils as you sit at your desk, or in your den? Does the tug of an imaginary trout make your hand suddenly grip the penholder and your eyes get filmy in retrospection of some fight with a game old rainbow or mackinaw?

Does your heart yearn for communion with broad lakes or high peaks? Are your feet itchy to scramble up the face of a cliff lying between you and the pinnacle which challenges you to the climb? Can you feel the press of the cool rock against your body where yorcling to the surface for a brief moment of rest? Can you hear the rattle and see the jump of the rock dislodged by your feet as it bounds towards the bottom of the canyon?

The big woods are calling. Spring Fever is a polite excuse for not answering the call of your native heath—the woodlands. The spicy tang of the pine needles pervades the atmosphere and the clean air, a million miles big, waits to give you a lung full that is not laden with the grime of city winds. A hunger so strong that your mouth waters when you just think of a spicy mulligan stew, awaits you in

the out-of-doors. The swirl of the water below the rapids hides the form of a big one and the crack of a twig in the thicket means that your wild brothers are stealthily taking stock of prodigal man.

Campfires are dancing in the shadows of giant fir trees in this land of the clean outdoors. Pitchy smoke curls as incense to nature. Spruce-bough beds are there where your tired muscles can rest. Perky points of light that seem unbelievably near wink in the heavens and perhaps a luminous disc, the moon, lifts its lamp above the spire-like points of the pines. The open road is beckoning to all the outdoors' family. The greenery of God's woods holds forth a welcome and promise of shelter and rest.

The outdoors is in your blood. We all belong to the Green-Tree Fraternity through inheritance from our forbears and we answer the call. So while vacation time is still beckoning appealingly and has not come to "stare us in the face," American Forestry is offering an outline of "where to go in our National Forests." The editor of this section has collected brief statements from each of the Forest Service Districts where are many, many acres of outdoorlands—where all of your dreams of outdoor life may come true. From this list our reader can surely pick some appealing place to go for his stay in the open and then can write to the District headquarters of the particular forest he plans to visit to get more information on what that place has to offer the members of the Green-Tree Fraternity—the

that steadily growing clan—the lovers of things outdoors.

THE GREEN INN

By Theodosia Garrison

I sicken of men's company—

The crowded tavern's din,
When all day long with oath and song
Sit they who entrance win;
So come I out from noise and rout
To rest in God's Green Inn.

Here none may mock an empty purse
Or ragged coat and poor,
But Silence waits within the gates
And Peace beside the door;
The weary guest is welcomest,
The richest pays no score.

The roof is high and arched and blue,
The floor is spread with pine;
On my four walls the sunlight falls
In golden flecks and fine,
And swift and fleet on noiseless feet
The Four Winds bring me wine.

Upon my board they set their store—
Great drinks mixed cunningly,
Wherein the scent of furze is blent
With odor of the sea.
So from a cup I drink it up
To thrill the veins of me.

It's I will sit in God's Green Inn,
Unvexed by man or ghost,
Yet ever fed and comforted,
Companioned by mine host
And watched at night by that white light
High swung from coast to coast.

Oh, you who in the House of Strife,
Quarrel and game and sin,
Come out and see what cheer may be
For starveling souls and thin
Who come at last from drought and fast
To sit in God's Green Inn.

(Reprinted.)

CURIOUS GLACIERS AND CRAGGY PEAKS

By K. D. Swan.

THE country of District One is extremely diversified, and one may find in all parts features of some interest to those seeking recreation. In the plains country of

eastern Montana the timbered mesas of the Sioux and Custer Forests offer the vacation seeker shaded areas where he may picnic and camp. In south central Mon-

tana is the Beartooth Forest. Here one finds a jumble of rugged peaks, many of them snowcapped, and with glaciers on their sides. Here is located the famous Grasshopper glacier, where one may see imbedded in the ice myriads of grasshoppers imprisoned, no one knows how, in some prehistoric time. The Absaroka, Gallatin and Madison National Forests lie to the north and west of the Yellowstone National Park and within their borders are mountain peaks, canyons and streams unrivaled anywhere. The famous West Gallatin Canyon, lying on the road between Bozeman and the west entrance of Yellowstone Park, has become duly famous of late for the grandeur of its scenery.

The Helena, Deerlodge and Beaverhead Forests contain much to interest the tourist and vacationist. Within a short distance of Helena, Montana's capital, is much fascinating country. There are steep-sided canyons cut in the limestone formation, through which flow well-stocked streams. Perhaps no forest in the District is more frequented than the Deerlodge, for here the busy workers from Butte and Anaconda seek relaxation away from smelter and mine.

Farther north lies the wilderness of the Flathead, and Lewis and Clark forests, one of the few remaining unopened wildernesses of the country. Here is a little-known area of mountains and lakes, well forested, and abounding in game and fish, where one may travel for days, and forget the existence of towns and railroads. It is a territory frequented by hunters of big game in season. Northwest Montana is more heavily wooded than other parts of the State. Parts of the Cabinet, Kootenai and Blackfoot Forests are covered with yellow

pine, larch and fir timber. It is a region fairly accessible, and yet having much of the charm of primitive wildness. Good fishing streams are abundant, and many beautiful lakes are hidden in the heavy growth of timber.

Missoula may be likened to the hub of a wheel, from which radiate in all directions, spokes which lead into a realm of recreation. The famous Bitter Root valley, considered by many the most beautiful of the smaller valleys of America, lies surrounded by the Bitter Root National Forest. Along the west boundary is the rugged Bitter Root range, whose summit forms the Montana and Idaho State boundary. To the west of this range, on the Idaho side, are the Nezperce and Selway Forests, wildernesses which contain country as yet unpenetrated by civilization.

Farther to the north lie the Clearwater and St. Joe Forests, which, although heavily visited by forest fires, yet contain much of interest to the hunter and fisherman, and to those wishing to leave the main lines of travel. It is a rough, mountainous country which tends to be heavily timbered with white pine, fir and spruce.

North Idaho contains two lakes of surpassing beauty on National Forest land. Priest Lake on the Kaniksu Forest is a beautiful sheet of water set in the midst of a heavily timbered, mountain-walled valley. It is much sought by vacationists, and the Forest Service has here laid out cottage sites for lease. Pend Oreille Lake is a large body of water with well-wooded shores and numerous bays and islands.

Write to the District Forester at Missoula, Montana, for further information.



MOUNT HOOD AND LOST LAKE

Is a vacation in a place like this not worth a trip from Portland, Maine, to Portland, Oregon, or even farther? Best of all, we own these places and they are ours to enjoy.

BY AUTO, RAIL, HORSE, FOOT OR CANOE

By H. N. Wheeler

RUGGED, white-capped mountain peaks, deep, rock-bound canyons, dashing waterfalls, lakes of deepest blue, perpetual fields of ice and snow, swift running streams where lie gamy trout, pine-clad hills, quiet, shady nooks, highly colored wild flowers and beautiful song birds attract to the fifteen National Forests in Colorado of District Two, each year thousands to the outdoor life they crave.

The Colorado, Pike and San Isabel National Forests along the front range are easily reached by train and by auto, but beyond these are other Forests where thousands of delightful spots beckon the traveler. The auto gypsy reaches many of these places, but pack trips on the San Juan, Uncompahgre, Battlement, Rio Grande, Cochetopa, Holy Cross, Gunnison, White River and Montezuma take one into real solitudes.

In the San Juan region of the Uncompahgre and San Juan Forests, tremendous peaks, spires and massive mountains of vari-colored rock stand out in bold relief, and attractive waterfalls dash down their rugged slopes.

The Leadville, containing the second highest peak in the United States, Routt and Arapaho Forests are partly accessible by auto or may be covered by pack outfit, but are best seen by those who travel on foot.

Five of the Forests in Wyoming are under the direction of District Two. The Hayden and Medicine Bow in the southern part, the Washakie and Shoshone in the northwest and the Bighorn in the north central part of the State with their extensive virgin forests, lakes and streams teeming with trout, lofty peaks and deep canyons lure the lover of the great out-of-doors.

The Black Hills of South Dakota, containing the Harney and Black Hills National Forests, is a beauty spot that acts as a lodestone for many a weary traveler seeking the cool of the mountain lands combined with the green of the pines and spruces. Here are unexplored

caves, beautiful mountain streams, picturesque lakes and even rugged rock pinnacles, all easily accessible to the automobilist.

The Michigan National Forest, partly in the upper and partly in the lower peninsula of the State, near the more densely populated portions of the middle west, draws thousands of visitors who find rest and quiet or a chance to fish and hunt.

Minnesota is blessed with two National Forests, the Minnesota and Superior. In the Minnesota National Forest, the Mississippi River, Cass, Winnibigoshish and many smaller lakes attract thousands of people each year

who come by auto or train to fish or bathe in their clear waters, or spend a few weeks in summer homes or in boys' or girls' camps. But the Superior National Forest, containing more than a million acres of timber, lakes and streams along the Canadian border, opposite the Quetico Forest Reserve of Canada, is truly the vacationists' paradise. A few miles from settlement and you come to a real wilderness where bear, deer and that monarch of all North American game animals, the bull moose, are frequently seen and beaver are so tame as to be easily photographed. Canoe trips, hundreds of miles in length, may be taken without once returning to civilization, and fish, lake trout, pickerel, wall-eyed pike and the mighty muskellunge are caught with little effort.

Nebraska National Forest, a broad stretch of never

ending sand hills, being converted by planting operations of the United States Forest Service, into a beautiful and valuable timber land, is unique and interesting.

From the Montezuma and San Juan in southwestern Colorado to the Shoshone on the north in Wyoming, embracing the whole stretch of the mighty Rockies, the Black Hills of South Dakota, the sand hills of Nebraska and those gems in northern Minnesota and Michigan are lands belonging to the people of the United States. They are valuable for their economic uses, but they are

Riding the Tide

Gee! but it's great to be footloose and free again;
Far from the din and the turmoil and grind;
Seeing the things I've been wanting to see again;
Finding the peace I've been hoping to find!
Wearing the duds I've been wanting to wear again;
Doing the things I've been yearning to do;
Knowing no worry or trouble or care again—
Riding the tide in a birch bark canoe!

Sweet to my ears is the dip of the oars again,
As through the waters I gladsomely skip;
Great to be here in God's world—the outdoors, again,
Feeling the zest and the sparkle and zip!
Smelling the perfume of balsam and pine again;
Knowing the old thrill of living anew;
Draining the cup of the joys that are mine again—
Riding the tide in a birch bark canoe!

Gee! but it's great to know pleasures like these again;
Far from the struggle and bustle and strife;
Feeling the tingling whip of the breeze again;
Drinking deep gulps of the ozone of life!
Here in the land of content, and *real* joy again,
Underneath skies that are smilingly blue;
Youth has come back—I'm a light-hearted boy again—
Riding the tide in a birch bark canoe!

—JAMES EDWARD HUNGERFORD.



CRAGS AND A LAKE OF THE MEDICINE BOW

High at timberline nestle lakes of much beauty encircled by veteran trees. Wyoming's Forests are some of the most striking national playgrounds easily reached over auto and rail highways.



STEEL HIGHWAYS TIE EAST TO WEST

The great transcontinental rail systems bring the population of the Atlantic Seaboard quickly to their playlands of the West. Here a vista of haze-touched peaks would greet the traveler from Pullman window.

also the playgrounds of those seeking health, rest and re-creation of mind, body and soul. The Forests of District Two welcome you. They are yours for play and enjoyment.

For further information, write the District Forester, Denver Colorado.

"A FRIEND TO MAN"

The author of "The House by the Side of the Road" was an enthusiastic traveler, says "The Federation" recently. On one of his trips through New England, he came across a little, unpainted house set almost in the road, at the top of a long hill. An oddly shaped sign post finger pointed to a well-worn path, and a sign read, "Come in and have a cool drink." Following the path, he found at some distance from the house a spring of ice-cold water into which a barrel had been sunk. Above it hung an old-fashioned gourd dipper. On a bench was a basket of fragrant apples, with the sign, "Help yourself."

Returning to the house, he found a childless old couple in poverty, whose only support was the rocky farm. Too poor to give money, and desiring to help others in some way, they had resolved to share their cool water and abundant fruit with the travelers by the way; and so, from the ripening of the first plums to the harvesting of the last apples, a basket of fruit was kept at hand for any who might come up the long hill.

The beautiful spirit of ministry revealed in this old couple so impressed Foss that he conceived the poem here printed, in which that spirit is portrayed and glorified.

THE HOUSE BY THE SIDE OF THE ROAD

There are hermit souls that live withdrawn
In the peace of their self-content;
There are souls, like stars, that dwell apart
In a fellowless firmament.
There are pioneer souls that blaze their paths
Where the highways never ran—
But let me live by the side of the road
And be a friend to man.

Let me live in a house by the side of the road,
Where the race of men go by—
The men who are good and the men who are bad,
As good and as bad as I.
I would not sit in the scorner's seat,
Or hurl the cynic's ban—
Let me live in a house by the side of the road
And be a friend to man.

I see from my house by the side of the road,
By the side of the highway of life,
The men who press with the ardor of hope,
The men who faint with strife;
But I turn not away from their smiles or their tears—
Both parts of an infinite plan—
Let me live in a house by the side of the road
And be a friend to man.

I know there are brook-gladdened meadows ahead,
And the mountains of wearisome height;
And the road passes on through the long afternoon,
And stretches away to the night.
But still I rejoice when the travelers rejoice,
And weep with the strangers that moan,
Nor live in my house by the side of the road
Like a man who dwells alone.

Let me live in my house by the side of the road,
Where the race of men go by—
They are good, they are bad, they are weak, they are strong,
Wise, foolish—so am I.
Then why should I sit in the scorner's seat
Or hurl the cynic's ban?
Let me live in my house by the side of the road
And be a friend to man.

—SAM WALTER FOSS.

SUNSHINE PLAYLAND

By Joseph C. Kircher

SUMMER mountain playgrounds, winters on the desert, ruined cities of prehistoric man, romance of early Spanish explorations, picturesque Indian Pueblos, quaint Mexican Placitas, and with all, sunshine everywhere all the time—this is the great Southwest—Arizona and New Mexico, in District Three.

Here, more than 1,000 years ago, flourished an Indian civilization whose ruins are found in nearly all of the Southwestern National Forests, although they are most

Persons who desire the backwoods, will find an ideal country in the Mogollon Mountains on the Gila National Forest in west central New Mexico and the White Mountains on the Apache Forest in Arizona—a wonderful mountain country with high peaks, deep canyons and ridges well timbered with pine and spruce, interspersed with mountain meadows. The streams abound with trout, while deer and wild turkeys frequent the timbered hills and grassy meadows.

Opportunities for summer vacations among mountain scenes and yet in comfort are offered by the hotels and summer camps on the Pecos River, Santa Fe Forest, as well as at Cloudcroft, on the Lincoln Forest (both in New



SUNSHINE AND SHADOW ON THE TRAIL

Canyons and ridges, well timbered with pine and spruce. Deer and wild turkeys frequent these hills. Apache National Forest, Arizona.

numerous on the Carson and Santa Fe Forests in Northern New Mexico. The largest and most interesting of these are the communal houses and cliff dwellings of the Rito de los Frijoles and the adjacent Pajarito Plateau, within the Bandelier National Monument.

With Santa Fe as a center, and lying largely within the Santa Fe National Forest, is the most interesting 50 mile square in the whole United States. Here, in addition to the prehistoric ruins, are many of the present day Indian Pueblos and it is in this region that the Spanish conquistadores established their headquarters early in the sixteenth century. Here also are mountains with lofty peaks, unexcelled scenery and clear trout streams. And everywhere, whether in mountain or desert, there are blue skies and wonderful sunsets.



WHERE LIVED THOSE WE HAVE SUCCEEDED

Bandelier National Monument—Santa Fe National Forest, New Mexico—Ruins of Ancient Cliff Dwellers restored by the New Mexico Archaeological Society in cooperation with the United States Forest Service.

Mexico). In northern Arizona the region about Flagstaff, on the Coconino and Tusayan Forests also has delightfully cool summers.

Portions of the Tonto and Coronado Forests of southern Arizona, because of their comparatively low elevations, have mild winter climates suitable for persons who desire winter outings among the picturesque semi-arid mountains. Within the Tonto Forest lies the famous Roosevelt Dam forming a lake some 20 miles long

from which the Salt River valley secures its irrigation water.

The recreational development of the southwestern Forests has not been as rapid as that in other parts of the west and this unique country is little known. A trip into it, however, will reveal a world of interesting things found only in this great land of sunshine. Write to the District Forester, Albuquerque, New Mexico, for more complete information.

GRAND TETON TO GRAND CANYON

By James E. Scott

FROM the lofty Tetons of Wyoming south to the Kiabab Plateau and the Grand Canyon—from the eastern boundary of Utah west into Central Nevada, in District Four, a new vacation land is steadily winning recognition among the great out-door attractions of the West. Recreation seekers to the number of 200,000 last summer found all that they sought in the Intermountain

Nature than that land of forests, lakes, and mountain streams which lies at their feet.

Central Idaho and the Sawtooth,—for many years known, appreciated and loved by those hardier ones who would not wait for highways, and now that the auto roads are reaching into the heart of the region, calling increasing thousands from all parts of the country to share its boundless variety of summer pleasures.

There are still those who like to leave the beaten paths and with pack outfits seek out the less accessible and often the most interesting sections. For these a trip along the upper South Fork of the Payette River, clear to its source and the source of other rushing rivers across the great Payette Game Preserve, into that jumble of lordly Sawtooth peaks and emerald lakes, will surely measure up to every anticipation.

Logan Canyon and Bear Lake.—Forty miles of scenic



IN JACKSON HOLE

Jenny Lake, in the Teton National Forest, is one of the scenic gems which have made this section famous. It is easily accessible by rail and stage or by auto.

National Forests. They'll be back this year with many more.

Jackson's Hole and Grand Teton—surely no one can say he has "done" the West without a trip into the "Hole," where the romance and thrill of the early West still lingers—where the great herds of elk make their winter quarters and where each summer day may be devoted to a different phase of real outdoor enjoyment. No range in America excels in rugged grandeur the Teton Peaks. No region could be more enticing to the camper, hunter, fisherman, or lover of the beautiful in



CLIMBING MT. TIMPANOGOS, WASATCH NATIONAL FOREST

This party plodding to the top of the craggy peak are in surroundings belying the fact that it is July. Many people visiting our National Forest playgrounds of the West will for the first time tread on snow during the middle of summer.

beauty well describes the beautiful drive over the new Logan Canyon road, through the Cache Forest in northern Utah, and for good measure, at the end of the drive, Bear Lake. Unusually beautiful in its setting, with ideal beaches and campsites, fine fishing and boating, this lake is rapidly winning its place in the hearts of those who travel.

Mount Timpanogos,—bearing the only remnant in Utah of the great alpine glaciers of the Ice Age, is one of the many features which brought nearly 50,000 visitors to the Wasatch Forest last season. The city of Salt Lake, the smaller cities of Provo, American Fork, Lehi and others nearby are uniting with the Forest Service in making accessible the recreational resources of the Wasatch Forest and stimulating their use. Community camps, organized climbs to the summit of "Old Tim," a newly discovered and truly wondrous cave in American Fork Canyon, pack trips into the back country, and other features are of more than ordinary interest.

On south, we come to Fishlake, in the National Forest of that name, its bed 9,000 feet above sea level, seven miles long, two wide, exceedingly deep, and abounding in native and imported varieties of trout. Many steelhead and mackinaw are taken here weighing from 12 to 20 pounds.

Bryce Canyon, on the edge of the Sevier Forest, and Zion Canyon have in the past few years won rapid recognition. Bryce Canyon is a scenic gem, presenting to the eye a marvelously beautiful array of towers, spires, minarets, fortresses and cathedrals in every color of the rainbow.

The Kaibab Plateau, with its wonderful body of yellow pine timber, its vast herds of protected deer, and the Kaibab squirrel, found nowhere else, constitutes an outdoor attraction which is certainly a fitting approach to the Grand Canyon of the Colorado, which bounds it on the south.

And here we are—all the way from the Tetons to the Canyon where we must stop because the editor says so, and not a word has been said of the Uintas, of the Natural Bridges, and Cliff Dwellings of the La Sal in Utah, of Lamoille Canyon and the Rubies, Lehman Cave, or Mt. Wheeler, in Nevada, Big Springs or the Big Falls of the Snake on the Targhee Forest, the Salmon River Gorge, the Thunder Mountain country, Payette Lakes, or a hundred others of which much might be said. But blame the editor for this and come this summer and look them up. The District Forester, Forest Service, Ogden Utah, will gladly answer inquiries and the Service organization in the Intermountain District will do all it can to make your visit a pleasant one.

THE CALL OF CALIFORNIA'S FORESTS

By L. A. Barrett

THE National Forests of California in District Five furnish a wide range of recreational possibilities to the tourist, camper, hunter or fisherman. Much of California's famed beauty is within them. East of San

Diego, in the Cleveland National Forest and easily accessible by good roads, is the Laguna Mountains recreation area. Adjacent to Los Angeles is the Angeles National Forest, a very popular region for summer homes



A RECREATION CENTER IN THE INYO

Here is a picture of a camp where some of the several million people who last year visited the National Forests for recreation found their recreation objective.



A LAKE IN A CALIFORNIA FOREST, THE STANISLAUS

Vacation time in the Forests is paradise time for the youngsters. All the secrets of the woodland are theirs to explore. Here they get an education never found in text books.

and for hiking trips. Northwest of this lies the Santa Barbara National Forest. The Monterey Division of this Forest is a particularly good deer hunting region.

The Sequoia and Sierra National Forests cover the southern portion of the Sierra Nevada Mountains and are an ideal region for packing trips, as well as supplying the best of fishing. They are mountain play areas of unsurpassed charm.

Along the east side of the Sierras, between beautiful Lake Tahoe and Owens Lake, lie the Mono and Inyo National Forests. This is one of the most noted mountaineering sections of the State and is renowned for excellent fishing.

Just north of Yosemite Valley and adjacent to the old "mother lode" mining country of Bret Harte, is the Stanislaus National Forest, a delightful region for recreation of all kinds and very popular for summer homes.

To the north of this lie the Eldorado and Tahoe National Forests, which surround Lake Tahoe, the most popular mountain lake region in the West. Here, snuggled in depths of giant forests, little lakes shimmer from pine-scented breezes and spire-like peaks stand as sentinels inviting travelers to this outdoor playground. Lying north of the Tahoe country, in the Plumas National Forest, is the Feather River country. Here

was once the home of Mark Twain, the beloved portrayer of the West. Now it is a popular fishing and resort region.

North of this and surrounding Mount Lassen is the Lassen National Forest, a region of interesting natural phenomena, and a good hunting country. Lassen is the only active volcano in continental United States.

In the northeastern corner of the State lies the Modoc National Forest, home of the big mule deer. To the west lies Mount Shasta, and the Shasta National Forest, brooded over by the crystal whiteness of the peak. It is a favorite mountaineering and fishing region.

The Klamath National Forest in the northwestern corner of California is still some of the true old West, but with the opening of the Klamath River road, now under construction, it will soon be accessible to motorists.

South of this lies the Trinity National Forest, a fine fishing and hunting region, and on south of here in the California National Forest is found some of the best deer-hunting country in California.

For further information relative to the recreational advantages of this wonderful region of mountains and lakes, streams and forests, write the District Forester, Forest Service, Ferry Building, San Francisco, California.

CAVES, CRAGS AND TRAILS

By John D. Guthrie

DENSE forests, live glaciers, snowy peaks, many lakes and good fishing greet the traveler in the National Forests of the Pacific Northwest in District Six. By motor, railroad, pack outfit, or afoot, he may reach some, if not all, of these attractions in whatever National Forest he may enter. In Oregon he may ride or hike northward along the Cascades' crest from Crater Lake to Mount Hood over the Oregon Skyline wonder-trail. This trip alone passes through six different National Forests—the Crater, Umpqua, Deschutes, Santiam, Cascade and Oregon. At the end of the trail is Eagle Creek Forest Camp, the last word in forest campgrounds, located just off the world renowned Columbia River Highway and 44 miles east of Portland.

The Oregon Caves, "the Marble Halls of Oregon," as Joaquin Miller loved to call them, are in the Sis-

kiyou Forest in southern Oregon, and are reached over a new Forest Service road. One may take a pack outfit in northern Oregon and go into the little Switzerland of the Northwest, the alpine lake country of the Wallowa and Whitman Forests, in the Wallowa and the Blue Mountains country. He will find turquoise lakes literally and truly teeming with trout, waiting, yes eager, to be caught.

Crossing the lordly Columbia River into the State of Washington, the tourist enters other wonderlands. The Columbia Forest with Mounts Adams and St. Helens, with Spirit Lake at its base; then the Rainier National Forest with the "Mountain that was God" looking down upon him; then the Snoqualmie Forest with its famous Sunset highway piercing it east and west; then the Washington Forest, with its high, rugged peaks, its manifold

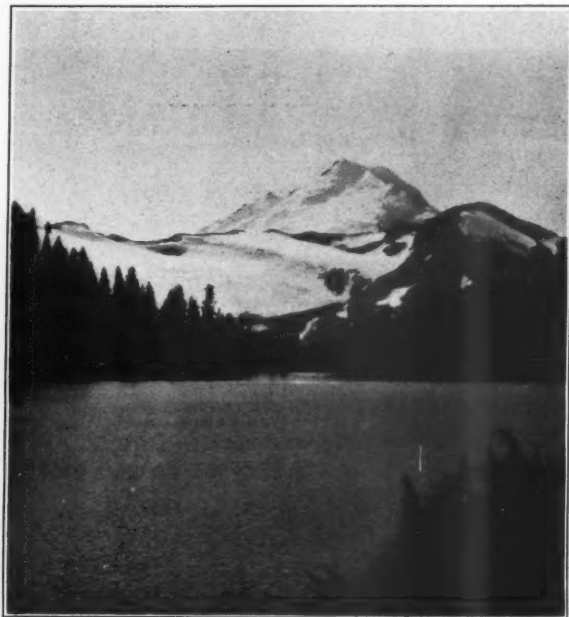


SNOW-CAPPED ST. HELENS AND SPIRIT LAKE

Beauty of forest and peak reach a climax in the play places you own in the National Forests. Here in the Columbia National Forest you can find many places to satisfy your longing for beauty in the outdoors.

glaciers, its mountain goats, its truly alpine scenery—a region to be seen thoroughly only by the experienced mountaineer.

Going west, across the Sound, one may enter a vacation kingdom all its own, the Olympic Forest, with its



MT. BAKER FROM CHAIN LAKE

Lakes, streams and the beauty peaks of the Forests of Oregon and Washington are some of the scenic treasure belonging to you and inviting you to plan your vacation for this season so you may visit your Forests.

crowning glory in old Mount Olympus. Here, nestling at its base, are the jewel lakes, Quinault, Crescent and Cushman. Or going east from Seattle the traveler will come to Lake Chelan, that Norwegian fjord in its inland setting of towering mountains, or the Wenatchee Forest with its lakes: Kaches, Keechelus and Cle Elum. Still further east is a country as yet unknown to the tourist, the Colville Forest, where a pack outfit must be one's motor car, Pullman and diner.

Throughout the twenty-two National Forests of the North Pacific District the tourist will find 425 forest camps set aside and ready for his use. Eagle Creek, along the Columbia highway, with its tables, benches, stoves, piped water, comfort station, autos and consequent crowds—the acme of forest camps—to Twin Lakes Forest camp on the Washington Forest, the newest, which he can reach only via horseback and where he must rough it, but amid heaven-kissing peaks, all await the traveler. Surely, amid such an array of vacation delights the most fastidious may find something to

please him, or the real mountaineer may find his heart's delight, beside some crystal lake set high in the mountain meadow, jewel-flowered, with only the trees, the mountains and the stars for companions. Mountain climbers may add new laurels to their sweating brows, for here are Diamond Peak, The Sisters, Jefferson, Hood, Adams, St. Helens, Rainier, Olympus, Glacier Peak, Baker, Stuart and North Star—all with living glaciers, and all well worth the effort of a climb. Nowhere else within the United States can the tourist find such glaciers as to number, size, beauty and interest. Fishing? It is here. Here is where the fish equal to those in the stories may be found. Do you hunt with a camera? Eighteen out of the 22 National Forests have elk; four have mountain goats; three mountain sheep—and as for



ON THE OREGON SKYLINE TRAIL

Spread beneath your feet, as you went your way over this trail through Oregon's scenic mountains, lies a world of loveliness. Lakes and timbered ridges vie with the appeal of high peaks for your attention.

deer, both mule and white tail, they're here. If you have not seen this part of your America it is high time that you did.

Write to the District Forester at Portland, Oregon, for literature.

FROM MAINE TO FLORIDA

By Thomas H. Gill

EASILY accessible to our massed population of the Atlantic Coast lie the National Forests of the East in District Seven. These, from a recreational standpoint, present a quite different situation than is found in the West. The Western Forests were carved, for the most part, out of undeveloped public domain. The Eastern Forests are being built up piece by piece, as a mosaic is laid. Economic development coming prior to the establishing of these forests has resulted in a situation where resort and summer home sites are already in private ownership and the recreational function of the forests of the East consists in providing tributary playgrounds, picnic and camping grounds for tourist, automobilist, fisherman and hunter.

Since nearly four-fifths of the total population of the United States live in close proximity to the eastern National Forests, the question of distributing the greatest good to the greatest number resolves itself into holding open to the public every available campsite, every spot of scenic beauty, and in making them accessible to all the people.

Happily, the eastern vacationist has the length of the United States from which to choose, for the mountains of the Atlantic seaboard are dotted with the forests from Maine to Florida.

Northmost of all is the White Mountain National Forest lying within New Hampshire and Maine and embracing the rugged

slopes of the Presidential Range. Here is a land of unalloyed hearts desire to the lover of the outdoors. Among its landmarks of beauty are The Lakes of the Clouds, located 5,000 feet above the sea; Snow Arch, King's Ravine, and that great natural curiosity, "The Old Man of the Mountains," Carter Notch, with its twin lakes surrounded by high cliffs and alpine vegetation, contains one of the stone huts where the mountain climber finds shelter and food. Within the boundaries of the forest are many ponds and streams well stocked with speckled trout, where at evening, white tail deer come silently to drink.

North and south of Asheville, North Carolina, stretches the Pisgah Forest traversed by the Pisgah auto road. Here the tourist may motor to within a mile of the summit of Mt. Pisgah, leave his car on Government parking ground, climb to the top and lunch at the hotel on Pisgah Ridge.

In Arkansas the Ozark Forest offers its highways and byways—further west lies the Wichita Forest with its buffalo herd and its scenic highway. To fishing enthusiasts or lovers of water sports the Florida National Forest close to Camp Walton, affords many interesting trips. So whether you wish to spend January on Skis or in a bathing suit, whether you wish to cast a fly for speckled trout or troll for tarpon, you can find your pet outdoor enjoyment somewhere in our Eastern National Forests.



A BEAUTY SPOT OF AN EASTERN FOREST

Rugged canyon walls, as interesting as any in the Rockies, thrust up from this splendid water feature, the Tallulah Falls of the Shenandoah National Forest of Georgia.

ALASKA--THE ALLURING

By John D. Guthrie

A SEA trip with a scenic panorama unmatched anywhere awaits the summer tourist visiting National Forests of Alaska. Leaving Seattle, Washington, or Vancouver, or Prince Rupert, B. C., you can take a comfortable ocean steamer and start on a trip through the

"inside passage" where slopes of eternal greenness delight the eye. Here and there are waterfalls to break the curtain of green, and above all, snow-capped mountains piercing the very heavens. Southeast Alaska is a series of countless green islands, separated by innumerable

waterways. Thriving towns, salmon canning plants, logging operations, wireless towers, whaling stations, marble quarries, living glaciers, totem poles, perennially snow-capped peaks, dense forest-covered slopes and shore lines—these are characteristic of the Tongass National Forest of southeast Alaska.

Ketchikan, the metropolis of southern Alaska, is first reached. Here are located the headquarters of the Tongass National Forest. Going on north Juneau is reached, the territorial capital, and here also are the District Forester's headquarters for the Alaska District. Near Juneau are the large mining operations of Treadwell and Thane.

Passing through the panhandle country of southeastern Alaska, from your steamer chair you can see the age-old ice masses breaking off into the ocean, while above and around you rise peaks to thousands of feet. Totem poles, the clan records of a fast-passing race, gleam out from forested points as the steamer threads its way through the hundreds of miles of channels, straits, and natural canals of the Tongass Forest.

Although not on the regular stops for main steamers, roadhouses are found along this road, and scenery that



A DOCK FULL OF WHALE OIL
Industries of Alaska are as interesting to the visitor as are some of the other features. This is at the Whaling Station at Port Armstrong.

it will be worth your while to make arrangements to see Sitka, the place of all Alaska with a historical and romantic background. For here was the old Russian capital, and here yet are Russian churches and houses, and many landmarks of the old Russian occupation before Secretary of State William H. Seward, back in 1867 bought all this country from Russia for some two cents per acre.

The panhandle of southeast Alaska is practically all included within a National Forest, and here is beginning the construction of pulp mills to convert some of its enormous timber resource into newspaper print. The forest rangers here cover their districts and handle their forest business in 30-foot gasoline larches, instead of the more picturesque saddle horse or the more prosaic flivver of the National Forest areas of the States.

If you wish a longer sea trip then go farther westward to the Kenai Peninsula and the Cook Inlet country, where the Chugach National Forest is located. Starting out from Cordova, the headquarters of the Chugach Forest, you will see more glaciers, even more stupendous mountain masses rising before you, even more sublime scenery. Here you may see from a comfortable railway car, (on the Copper River Railroad), living glaciers and as sublime scenery as there is in all America, or all the world—that along the Copper River.

If you want an even longer trip take the railroad out of Cordova to Chitina, and from there take a car over the Richardson Trail, (they call it a trail) 320 miles to Fairbanks, a 3-day trip, in the interior. Comfortable

you will remember as long as you live. From Fairbanks you may come out to the Coast again over the line of the recently completed Government railroad, 560 miles, to Seward, passing through the wonderful Kenai Peninsula, the big game region of America today. Or, wishing an even longer trip, you may take a river steamer from Fairbanks on down the mighty Yukon river, to St. Michael, and to Nome, and back by ocean-going steamers, through the Behring Straits to Seattle or to Vancouver, British Columbia. All these trips are



ACRES OF ICE RIVER

The Mendenhall Glacier, within 11 miles of Juneau and reachable over a good auto road is a lodestone for travelers reaching this point.



THE DOCKS AT CORDOVA

Water surfaces of great extent are ruled over by massive mountains. Alaska and her forest lands call to all outdoor lovers.



A FOREST-BORDERED STRAIT

This view from an ocean-going steamer tells of the inviting outlooks to be had from such craft skirting the Alaska coast.

regular ones; the railway and steamship companies, both American and Canadian, will furnish you with particu-

lars and schedules and rates. You have not seen America until you have seen Alaska.

This is all yours. Why not this year visit your National Forests and enjoy their beauties?

Those who read this magazine are interested in the economic side of forestry. It is there in the National Forest areas. It is possible to enjoy all of the beauty of the playlands here briefly sketched and at the same time see forestry in practice. Play and timber production go hand in hand in the National Forests of our country and your vacation time may be educational as well as recreational if your next vacation is in these properties of yours.

Make your next vacation a Forest Tour—in your own expansive forest lands.—Arthur H. Carhart.

THE END OF THE STAGE COACH DAYS

By Earl H. Emmons

Well, at last the railroad found us,
And it looks plumb strange and queer,
Where the bronco and the buckboard
Held the trail for forty year;
And I reckon I'm a foggy
And back-numbered in my ways,
But I hate to see the passin'
Of the good old stage-coach days.

For I used to play the ribbons
In the days of Eighty-one,
And it makes me sick a thinkin'
That the final stage has run,
But I see the old coach busted,
With its nags turned out to graze
And I know that it's the finish
Of the good old stage-coach days.

There was music in the rattle
Of the busted winder-panes
And the clatter of the hosses
As they surged against the reins,
And the creakin' of the leather
And the screechin' of the stays,
But the music all is over
With the dyin' stage-coach days.

Yes, it all is past and over,
And it causes me a pain,
For there ain't no thrills or romance
Just a settin' in a train;
But the world goes by unheedin'
While the brave old coach decays;
And the nags and me stand thinkin'
Of the good old stage-coach days.

EDITORIAL

YOUR NATIONAL FORESTS

YOU, Mr. American Citizen, are a stockholder in one of the greatest forest properties in the world—the National Forests of the United States. Your stock certificate is your citizenship. The National Forests are owned by the public. They are administered by the Forest Service, United States Department of Agriculture for your benefit and for the benefit of your children and your children's children. They are a God-given heritage of the American people, created by nature working through uncountable years. They have been saved from private greed and despoilation by the courage of wise men. Once destroyed, nature only can rebuild them.

In view of the proposal of a few men to oust, by process of political law, the National Forests from the Department of Agriculture and into the Department of the Interior, it is well that you, as a citizen stockholder, consider what sort of a property you have and how it is being developed under the stewardship of the Forest Service. There are, in all, 149 National Forests, embracing in the aggregate 156,666,045 acres, of which two million acres are in the east and the remainder are in the west. They are for the most part wooded and mountainous tracts, ranging in area from a few hundred thousand to over a million acres each. In the west they embrace the high watersheds of practically all the important rivers which flow westward to the Pacific Ocean and eastward to the Mississippi River; in the east they form portions of the watersheds of the twenty-three important rivers which drain eastward to the Atlantic Ocean or westward to the Mississippi River.

They are, first and foremost, forest lands, dedicated to the continuous production of timber for the people of the United States and to the protection of the nation's water supply. The present market value of their timber and land is over a billion dollars. Their real and potential value is many times that amount because included in their assets is the value of their water for agriculture, navigation, water power and municipal purposes; the value of their forage crop for the production of meat; the value of their rivers, forests and mountains for game and recreation; and the value of their roads, trails, cabins and other permanent improvements, constructed in the course of the business development of the properties. That development, under the stewardship of the Forest Service, has sought to make these National Forests of greatest use and productiveness in perpetuity just as fast as economic conditions permit.

What of their timber assets? They contain 563 billion feet of standing timber, or twenty-five per cent of the remaining timber in the United States. All told the National Forests embrace seventeen per cent of all forest growing land in the United States. In addition to the many millions of acres containing forests of merchantable size, there are twenty million acres bearing young growing forests which are being protected against fire and other forms of devastation so that they will produce timber crops in the years ahead. Much of the timber on the National Forests is now inaccessible, but as local development proceeds, the merchantable stands are made

available, subject to cutting regulations which will assure continuous growth.

An idea of the development which is taking place in the timber administration of the forests is indicated by the fact that during 1920, 805 million feet were cut by 13,272 purchasers. This is a volume increase of more than 400 per cent over 1907. Investments made by purchasers for logging and manufacturing National Forest timber amount to \$40,000,000, and include 1000 permanent mills employing 30,000 wage earners. These are commercial operations which turn into the treasury of the United States about two million dollars annually. In addition, 25,000,000 feet are sold at cost of administration to some 6,000 settlers and farmers every year and over 35,000 people annually are granted free permits for small amounts of timber for their own local use. The present cut of timber from the National Forests, however, amounts to only about one-seventh of what the forests are capable of supplying on a sustained yield basis. As economic development makes the forests more accessible and as timber on private lands becomes more and more exhausted, full utilization of National Forest timber will return the people of the United States—even at present stumpage rates—a yearly revenue of \$14,000,000.

What are these Forests worth as conservators of water? Their potential value is incalculable today, the irrigated lands of the west represent an area of 13,200,000 acres, embracing 150,000 farms and producing annual crops worth \$247,000,000. Of the water used in irrigating these lands, 85 per cent originates in the National Forests. The water supply for twenty-two major irrigation projects of the Reclamation Service comes from watersheds protected by National Forests. In its sales of timber the Forest Service restricts its methods of cutting to those which will not injure the protective value of the forest cover. Apart from the water used for agriculture, 732 western cities, representing an aggregate population of 2,265,000 people, depend upon National Forest watersheds for their municipal water supply. So important is this service of the Forests that many of the municipalities have entered into cooperative agreements with the Forest Service for protection of their watersheds from fire and pollution.

Added to the foregoing, is the value of the waterpower on the National Forests. Thirty-one per cent of all waterpower in this country is on sites within these Forests, while a large part of the remaining power, although on sites outside the National Forests, is dependent upon water arising in them. The western mountains contain 72 per cent of our total potential water power and of this, 42 per cent is in the western Forests. This power is being rapidly developed. The Forest Service has in force 174 power transmission lines and 197 power projects, with minimum discharge capacity of 899,000 horsepower. During 1921 the Federal Power Commission, under the Water Power Act of 1920, received application for 124 sites within or partly within National Forest boundaries and aggregating the development of over

three million horsepower. Twelve of these were for power projects to be developed in connection with pulp and paper manufacture in Alaska. The total potential waterpower resources of the National Forests are estimated at a minimum of 8,497,000 horsepower and at a maximum of 16,874,000 horsepower.

As a result of systematized regulation by the Forest Service, the forage crop of the National Forest is now returning an annual income to the Federal treasury of close to \$2,500,000. By a system of range allotments under which nominal grazing fees are charged, the Forest Service has brought the National Forest ranges under practical and profitable administration which protects their productivity, stabilizes the stock industry and promotes the agricultural development of the country. Over 38,000 stockmen use the Forest ranges under paid permits and graze a total of almost 10,000,000 head of adult live stock. This amounts to 25 per cent of the live stock industry of the western states. In addition, local settlers are permitted to graze, free of charge, over 100,000 work and milch animals on the Forests. These are animals used on the ranches and farms.

The value of the National Forests for recreation is increasing by leaps and bounds. Already some six million people visit the Forests annually to camp, fish, hunt, hike, motor or rest. These forest tourists come from all parts of the United States. It has been estimated that, based upon present recreational use only, the National Forests represent a value of five cents an acre per year, or a total recreational value to the American people of

nearly \$10,000,000 a year. And the recreational use of these Forests today represents possibly less than one per cent of their total potential use. The rapid increase in the number of people deriving pleasure from the Forests is due in large part to their recreational development by the Forest Service. Over a thousand campgrounds have been set apart and posted and recreational permits have been issued for over 6,000 summer homes, cabins, hotels and club houses.

Values thus far considered are those arising from the work of nature and as applicable to the use of the people of the nation. The development of property so immense and so diversifiably valuable naturally has entailed man-made investments. In order to transact the business of the National Forests and to protect them from fire, 27,844 miles of trails, 27,000 miles of telephone lines, 1,184 miles of stock driveways and 7,700 miles of roads have been constructed at a total cost of \$25,833,000. Approximately \$5,000,000 more have been invested in other needed improvements such as fire breaks, lookout towers, ranger stations, camp grounds, bridges, fences, water development, forest nurseries, etc. Approximately 100,000 acres have been successfully reforested by planting trees. They represent a large potential value.

All this, and much more, are your National Forests. They are an empire of growing wealth. In area, they are greater than the combined acreage of forest land in Germany, France, Switzerland, Norway, Sweden, Belgium, Spain and the United Kingdom of Great Britain. As a public property, are they not worthy of your watchful appreciation?

FORESTRY IN TEXAS

PARTICIPATION of lumbermen, as evidenced by their representation at the recent meeting of the Texas Forestry Association, is an outstanding feature of the present forestry situation in the Lone Star State. It will be remembered that at the last session of the Texas legislature, forestry legislation was the subject of a vigorous contest which served to set the lumbermen apart as opponents of certain features of the association's program. The main issue was a state severance tax as applied to forests. This the lumbermen fought with great aggressiveness on the grounds that it was class legislation. While the bill failed to become a law, the contest was close and brought out a surprisingly strong and widespread public sentiment for definite forestry legislation. This sentiment, coming from many unexpected sources, seems to have aroused the lumbermen to the growing need for action.

In any event, a larger number of lumbermen than ever before attended the recent meeting of the State Forestry Association and took an active interest in the deliberations. Differences were adjusted and a constructive program framed, to which the lumbermen pledged their support. While those who had advocated a severance license tax, dropped the proposal in the interest of harmony and a solidly supported program. The recommendations adopted, if put into action, will mark a definite step forward. Among the measures proposed are the purchase by the state of cut-over lands for state forests and game sanctuaries, adjusted taxation of lands devoted

to the growing of timber, greater encouragement in the reforestation of land chiefly valuable for forest crops, by the establishment of demonstration areas and other needs, more effective fire control and broader co-operation with the Federal Government. Although the former opposition of the lumbermen has been removed, the fact that the association's program will have to be financed by direct appropriations or the issuance of bonds by the state in lieu of a severance license tax calls for nothing short of the lumbermen's aggressive support.

A long range view of the situation indicates that the lumbermen of Texas have been given an unusual opportunity to join forces with other interested organizations in an active and constructive effort to give the state the kind of a forest policy it needs. Certainly, the urgency of the situation is apparent. With an original stand of virgin pine timber covering 14,000,000 acres, only 2,000,000 acres remain uncut. This is being cut at the rate of 200,000 acres a year, so that the exhaustion of the state's virgin pine is placed at ten years hence. In the meantime the state's need for timber is increasing and the prediction is made that within a very few years Texas will pass from a lumber exporting to a lumber importing state. Indeed, it is a question if this change has not already taken place. The present yearly lumber cut of the state is slightly less than one and one-half billion feet, while a recent estimate from the state forester's office places the annual consumption of wood by the state at almost two billion feet.

If the industries of Texas are alive to their own future welfare, they will lend vigorous support to a policy which proposes to put the cut-over lands of the state to work producing timber. There are in Texas approximately six million acres of cut-over forest land, of which two million acres contain young growth. The remaining four million acres are practically unproductive but

could be reforested naturally if given adequate protection from fire. In the whole state the present annual growth of saw timber is only 170,000,000 feet, while the oil industry of Texas alone uses almost double that amount of wood annually. Loss of economic independence, so far as a local supply of wood is concerned, is close at hand for the industries of Texas.

TENNESSEE MAKES FORESTRY EDUCATION COMPULSORY

TENNESSEE has joined the ranks of progressive states in putting forestry in the public schools. Indeed, the south seems to have taken the lead in this direction, both Louisiana and Tennessee now having laws requiring the teaching of forestry to the children of their schools. Although many state organizations are doing admirable work in the general promotion and encouragement of forestry education in the public schools and several states have laws providing for the teaching of fire prevention, the new law in Tennessee goes much further. It makes it compulsory for every public school in the state to give a course in forestry and plant life. The scope of the law is largely expressed in Section 1 of the Act, which reads as follows:

"Be it enacted by the General Assembly of the State of Tennessee, that the curriculum of every public school in this state shall include a study of forestry and plant life which shall be taught therein and which study shall include the names and varieties of trees grown in the state, their age of maturity, their value to the soil, to animals and birds, and when possible or practical the children of

such schools be given an object lesson in study of forestry by one or more visits during each semi-annual session to some conveniently located forests and there instructed and taught by their respective teachers or some competent person selected for such purpose."

The act further provides that each pupil, unless excused by the teacher, shall be required to write at least one short story or essay on forestry during the year. Tennessee is to be complimented for its recognition of the importance of forestry. In Europe, children appreciate the value of forests and the need of forestry. They develop what has been termed a "forestry sense" early in life because forest culture is a part of their community environment. That will come in America in time and the children of today, who acquire a true appreciation of forests, will be not only better citizens tomorrow but they will be better able to meet the important forest problems with which this country must cope during the next twenty-five years. The progressive example set by Tennessee may well be emulated by many other states.

FORESTRY AND THE REDWOODS

IF plans now being considered by a number of strong lumber companies in California mature, permanent forest management for a large portion of the redwood region will be assured. One of the largest of the redwood companies—the Union Lumber Company—has already definitely decided to handle its redwood lands on a plan of continuous timber production and it is now establishing a forest nursery for the production of planting stock for its cut over lands. Five other large companies are investigating the possibilities of applying permanent forest management to their properties. These six companies represent more than 50 per cent of the redwood production.

This movement should be of nation-wide interest because it carries with it not only assurances of a permanent supply of redwood—a wonderfully adaptive wood—but more than that, the perpetuation of vast stretches of redwood forests. The destruction of these forests, limited in range and of world-wide interest, has brought forth much public protest. They are indeed the wonder forests of the nation and the destruction of them wrought by lumbering is a sickening sight. But they represent huge investments by their owners who assert they cannot afford to donate them to the public or hold them as exhibition forests. The public, on the other hand, has thus far not been able financially to buy them at a fair appraisal. Permanent forest management, therefore, offers one solution to the situation and while it will not fully meet the views of those who desire to see the redwoods left in their virgin state, it will at least provide per-

manently, growing redwood forests in the redwood range. That will be a great step forward.

The redwoods are limited to approximately a million and a half acres along the northwest coast of California. Some 400,000 acres have already been cut over. The remaining stand is estimated at about 50 billion feet, or close to an average of 60,000 feet to the acre. It is not uncommon, however, for some areas to yield a cut of over 100,000 feet to the acre and on rich bottom lands as high as 200,000 feet. Individual acres will exceed that figure considerably. For example, there is record of one acre from which over one million feet of logs was cut.

In many respects redwood lends itself to forest management. It is one of the most rapidly growing trees in the United States. On average quality soil it will produce about 40,000 feet to the acre in 50 years. The wood is suitable for many different uses and it holds out great possibilities for the recovery of valuable by-products from both its thick bark and from the wood waste resulting from lumbering. Although the young trees are damaged by fire, the other growth is very fire resistant. Regeneration of cut over lands, however, cannot be left wholly to nature. Only about twenty per cent of the cut-over area will be forested naturally by sprouts from redwood stumps. The remainder of the area must be reforested artificially, in order to get satisfactory stocking.

If the plans now in the making are carried out and the redwood properties put under real forest management, the redwood lumbermen will thereby gain nation wide approbation—an asset of no small moment.

FIFTY YEARS OF ARBOR DAYS

CAN your town look ahead fifty years? What if a row of trees had been planted for you when you were born? What would they be like now? Supposing your town fifty years ago had started a town forest as is being done by so many places today. That forest would be a regular source of income now. Many towns of Europe do this and have done so for centuries. Take town beautification plans for example. Suppose they had been started fifty years ago? Would not their streets be attractive with trees and parkways?

The point to this is that the year 1922 is the semi-centennial of the founding of Arbor Day in this country. In the state of Nebraska the first Arbor Day was inaugurated by the State Board of Agriculture on January 4, 1872, when a resolution by J. Sterling Morton setting

ciation show J. Sterling Morton to have been long identified with the organization. His son, Joy Morton, of Chicago, is also interested in trees and recently gave a four-hundred acre estate west of that city for an arboretum.

Some of the pioneers mentioned in the call by the American Forestry Association to schools, women's clubs, civic societies, chambers of commerce and patriotic organizations to mark the anniversary are Morton, Fernow, Rothrock, Loring, Roth, Trelease, Higley, Northrup, Henry S. Drinker, Charles Sprague Sargent and a host of others. These men preached forestry when to be a "tree enthusiast" was to be a "crank." They were in the same category with those persons who worked for women's suffrage, prohibition, believed in flying ma-



AMERICAN LEGION TREE PLANTING IN CHICAGO

John J. Little, Jr., commander of the Theodore Roosevelt Post, American Legion, holding the first of two hundred memorial trees planted at the entrance to the Speedway Hospital. Judge Kenesaw Mountain Landis shoveling in the earth.

"Wednesday, the tenth of April, 1872 for tree planting in the state of Nebraska" was adopted. In that year more than a million trees were planted in what was known as the "treeless state." In 1885 the state legislature changed the date to April 22 in honor of Mr. Morton's birthday.

This year is also the semi-centennial of the establishing of the Arnold Arboretum at Harvard and the fortieth anniversary of the organization of the American Forestry Association for in 1882 the Association was started at Cincinnati with George E. Loring, of Salem, Massachusetts, as first president. The files of the Asso-

ciation and jokingly referred to automobiles as "horseless carriages." To get a perspective on how long ago it was when we had the first Arbor Day we must remember that it was four years before the centennial at Philadelphia, where the telephone was a "contraption," a sort of side show proposition.

In Nebraska the people have planted seven hundred thousand acres and as long ago as 1895 the legislature of that state proudly proclaimed by resolution that Nebraska shall henceforth be known as "The Tree Planter's State." Following the lead of Nebraska, Tennessee and

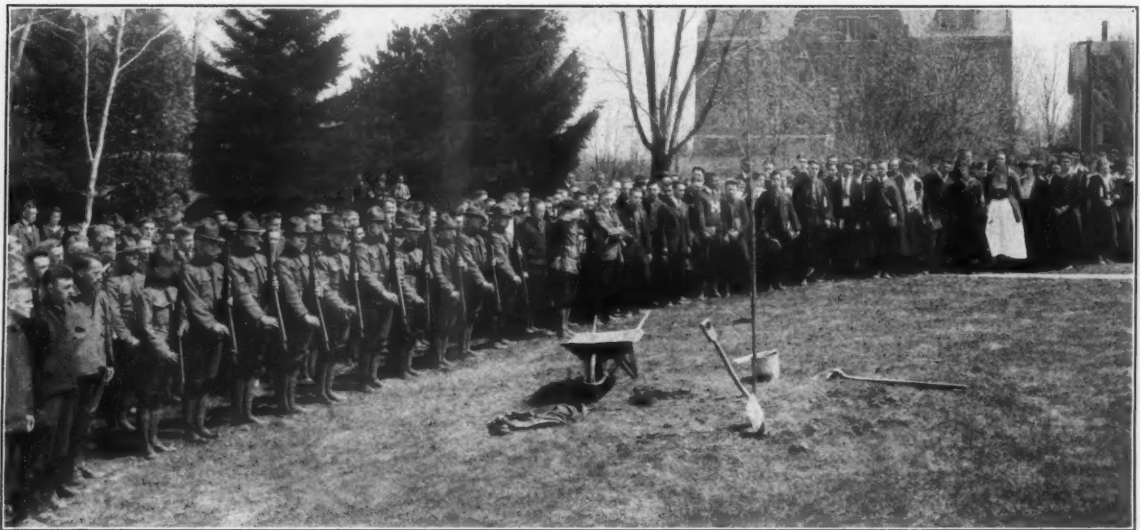
Kansas set Arbor Days in 1875. Then there was a lapse until 1882, when Ohio and North Dakota decided to have tree planting days. In Ohio the celebration was during the sessions of the convention in Cincinnati, which resulted in the forming of what is now the American Forestry Association. Warren Higley, of the Ohio Forestry Commission, suggested to John B. Peaslee, the superintendent of schools, that the school children have a part in the celebration. This resulted in a parade of twenty thousand school children through the streets to Eden Park, where trees were planted in honor of famous men. The following year at St. Paul B. G. Northrup, of Connecticut, introduced a resolution calling on every state to set aside a tree-planting day. In 1896 Spain adopted the idea and Hawaii took it up in 1905.

The day after the Armistice was signed the American Forestry Association began its campaign for memorial tree planting. The tree is the memorial

simply three things for its report:—for whom the tree is planted, the date of planting and the organization doing the planting, and in return the Association sends out certificates of registration for which there is no charge, and files the report on its national honor roll.

This memorial tree planting has taken on many phases. For instance, at Pasadena, California, which calls her memorial trees her "Hall of Fame," trees have been planted for some of California's great students of nature. In Washington the John Burroughs Clubs, under the direction of Mrs. John D. Patten, have planted a "Hall of Fame"—Red oaks for Burroughs, Muir, Thoreau, Whitman and Emerson. Theodore Roosevelt, assistant secretary of the navy, who as a boy knew Burroughs, placed the tree for the naturalist and Dr. F. W. Ballou, head of the Washington schools, took part in the program on the grounds of the Lincoln Memorial.

Heister Dean Guie reports that one thousand Ameri-



TREE PLANTING AT A COLLEGE

The students of the University of Maine, Orono, Maine, planted memorial trees and the attention which was given to the ceremony is indicated by the large crowd photographed on the college campus.

offering of the individual. He can plant a tree without waiting for a planning commission or an act of a city council. The trees are now being planted both in memory of the man who gave his life to his country and in honor of the man who offered his life when his country called. The idea put forth by the Association has grown from the effort of the individual to the effort of the municipality and even of the state. From a single tree planting by a school or a church, of which the Association has recorded thousands, we now have memorial parks and Roads of Remembrance. Motor Highway Associations everywhere have taken up the plan of tree-lined roads. Whatever form of memorial a municipality decides upon the Association urges that memorial be given the proper setting of memorial trees planted by the individuals of the community. The Association is registering these trees on a national honor roll. It requires

can elms bordering the Tacoma-Seattle High Line Highway were dedicated to Washington's World War soldier dead January 14 on the road a short distance from Seattle. The elms, four year-olds and from eight to twelve feet in height, planted by the Seattle Garden Club at intervals of 80 feet on both sides of the highway, extend for eight miles from the city's southern limits.

Lieut. Gov. W. J. Coyle, a veteran of the recent conflict, presided over the dedication exercises. Attending and participating were a score of notables, including Mrs. Alexander F. McEwan, president of the Seattle Garden Club, who conceived the idea of planting the highway trees. Gold star mothers were present, and representatives of the Seattle American Legion Posts, the Veterans of Foreign Wars, and the Disabled Veterans paid tribute to their fallen comrades. By next Armistice Day the

Garden Club plans to have 1,600 more elms established along the highway as far as the Pierce County line. Tacoma is expected to finish planting the remaining 13 miles. When the project is completed, the two Puget Sound sister cities will be linked by a Memorial Way 33 miles long, a noble Road of Remembrance that will keep ever fresh the valorous devotion of those whose heroism it perpetuates.

In Dallas, Texas, Forester Gilliam is doing a great work in arousing the city to tree planting. A school plants a tree for a former pupil as for example the University of Washington, at Seattle, which has named many for her former students. A church can plant a memorial row, a class plants trees, one for each of its members



PART OF A LARGE TREE PLANTING

The Business Men's League of Helena, Arkansas, planted trees on nearly all the streets of that town, in order to form municipal roads of remembrance. Miss Mary Yaeger, daughter of the Mayor of the city, holding the tree.

on the college campus. Twenty years later it can hold a reunion there. Atlanta writers plant trees in honor of famous men and women. A child is born and a tree is planted in its name. Tree planting has long been the practice of foreign visitors when in another country. The Prince of Wales placed many when he visited here. Pershing placed memorial trees in France as did Foch when in the United States. These trees are all being recorded by the American Forestry Association in its Hall of Fame for Trees with a history. This idea has brought hundreds of nominations of trees marking historic spots throughout the country. There is no activity to which tree planting does not lend itself. In no other way can a community be brought more closely together than by community tree planting.

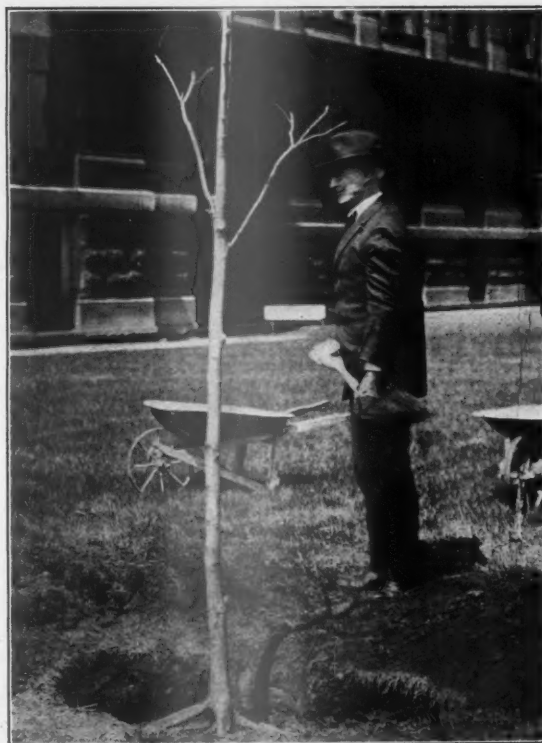
The Garden Club of Seattle has planted thousands



Wide World Photo.

TREE PLANTED FOR JOHN MUIR

Mr. H. Fairfield Osborn, President of the Museum of Natural History, New York, planting a tree in memory of John Muir, the famous naturalist, at the main entrance of that institution.



THE GOVERNOR'S TREE

Every governor of Indiana plants a tree on the capital grounds soon after taking office. Here is former Governor James P. Goodrich planting his tree.



ONE OF A THOUSAND ELMS PLANTED NEAR SEATTLE

These elms were dedicated to the soldier dead of the state of Washington, being planted along eight miles of road near Seattle. On next Armistice Day sixteen hundred more elms will be planted and Tacoma is expected to plant the remaining thirteen miles of road and thus, before many years have passed, the two cities will be linked by a beautiful green "Memorial Way."

of trees along a Road of Remembrance. On a smaller scale perhaps any organization can do the same thing and it is an assured fact that any municipality that has forward looking men and women, can have a memorial park which all its citizens can enjoy. That is what Charlotte, Michigan, did and many other towns are doing. The Roads of Remembrance plan is making for better intra-community spirit everywhere.

The American Forestry Association wants all to celebrate this year. This tree-planting is part of its educational campaign to bring to the people the importance of forestry and increases interest in the perpetuation of our forests. The State of Michigan is almost denuded of its pine. The state imports lumber to keep her factories going. Dr. Filibert Roth, of the University of Michigan, shows how the population in many counties has fallen off as the forests have vanished. Dr. Herman von Schrenk, of St. Louis, declares the same thing with regard to the southern half of Mis-

souri. It is the same story in Pennsylvania and in many other states.

We are just awakening to the possibilities of tree planting. The trees are monuments with a meaning for they live gloriously just as did those for whom they are planted. The glory is the thing to tell the world. Our sorrow is a private, personal affair and needs no telling in bronze or stone. Instead let us plant trees to tell of their glory, for that is the way they who went forth to the great adventure would have it. Plant the tree with an appropriate ceremony. The American Forestry Association will send a tree-day program and suggestions on what to plant to anyone who asks for it. Here is a semi-centennial in which everybody can take part. Organize schools and your community for in no other way can the community spirit be brought out as by tree planting. Can your town look ahead? It is not so long when you look back fifty years, so take that look forward and plant trees now.

**Register Your Memorial Trees In the National Honor Roll of the
American Forestry Association.**

BIRDS AND FLOWERS OF EARLY SUMMER

By Dr. R. W. Shufeldt, C. M. Z. S., etc.

(PHOTOGRAPHS BY THE AUTHOR)

RECKONING by the conventional rule of dividing the year into four seasons, we have come to consider March, April, and May the spring months. This, however, is a matter of latitude, in so far as our country is concerned; for, if we take March as an example, we know that in Maine it is characterized by all that pertains to winter, while in Florida the month of March resembles the early summer of the Middle Atlantic States—and

built their homes and reared their broods—at least those that do build nests; yet many of them still present the livery of their spring plumage unworn—particularly the males; while not a few, during the time we have in mind, start in to rear a second family, or even a third, as is the case in some species.

Then, few people are aware that we have one bird that puts off the time of mating and housekeeping until the latter part of June, and the bird in question is our common, but very beautiful Cedar bird or Waxwing—a species that students of American ornithology and many others know at a glance. Years ago, I had several of them alive for nearly a month, during which time I was successful in my efforts to obtain photographs of them, two of which are here reproduced. Many are unfamiliar with the reason why these lovely birds are called Waxwings; it is because a row of the wing-feathers upon either side are tipped with tiny, longish bits of some ma



AN OLD MALE CEDAR BIRD

Fig. 1.—This specimen shows the complete row of wax appendages on the wings, but no terminal ones on the tail feathers. The crest is depressed.

there you are. So, early summer in any part of the country is usually held to be a transitional season, with everything in nature, the weather included, partaking of what one expects late in the spring upon the one hand, and the first warm days of summer upon the other. In any event, it is one of the most charming seasons of the year—especially appealing to all lovers of the out-of-doors and all that nature holds for them in the open.

To be sure, the spring migrants among the birds have



A PAIR OF CEDAR BIRDS

Fig. 2.—These birds are shown on a branch of Sweet Gum, the one with its back toward the observer being the male. Note the beautiful black and velvety feathers surrounding the eyes.

terial resembling red sealing wax. Specimens are occasionally met with wherein similar bits are to be found on the ends of one or more of the tail feathers, generally on several of them; but it is exceedingly rare to find a specimen where all of the tail-feathers are so ornamented.

In the Bohemian Waxwing of the northern parts of this country, the Cedar bird has a close relative; the form is considerably larger, though very similar to its more diminutive cousin in other respects, such as plumage and the tips of wax. I never saw this species alive in nature but once, and that was a specimen I collected at Fort Fetterman, Wyoming, fully forty years ago. It is said they occur in great flocks in northern United States and throughout many parts of Canada, and that they have the same habits as the Cedar bird, which is likewise often met with in flocks of a hundred and fifty or more; indeed, in New England, I have seen flocks composed of at least three hundred individuals. They are very silent at all times, possessing only a few low notes of a peculiar *t-se, t-se* character and never anything approaching a song. Then, too, they are noted for their brave defence of their young when these are in danger, although they seem to care but little when their eggs are in danger of being taken.

Foresters and agriculturists generally should know that this species is one of the best friends they have, in that it preys upon several species of insects that are injurious to a great variety of trees—those of the forest as well as orchard varieties, especially apple and pear.

Shortly after they leave the nest, young Cedar birds have a curious way of standing together on a twig or some small branch, stretching out their necks to the limit; and in this attitude they will remain as im-

movable as statuettes for a considerable time, or until the old ones approach with food. A single bird so posed was photographed by me some years ago, and it is here reproduced in Figure 3.

Some birds may breed in early summer for the reason that their first nest was destroyed in some way, containing either their eggs or their young. I once found the

nest and eggs of our Ruby-throated Humming-bird early in June, and I shall always believe that some misfortune had overtaken their first attempt to rear the two fledglings that constitute the family in that wonderful assemblage of bird-forms. All the "Hummers" lay but two eggs to the clutch, and these are invariably pure white and of an ellipsoidal form. Nests of several species of our Humming-birds are here shown in Figure 4, and few things in nature are more beautiful or interesting. The majority of our North American Humming-birds construct nests much after the form seen in the illustration—little, cup-shaped affairs, frequently overlaid with bits of moss or lichen, pasted on by the builder through the use of its own glutinous saliva. As to the body of the nest itself, it is usually constructed of some cottony material obtained by the bird from various species of plants and trees. Some six or seven hundred species of these little gems of the bird world have been described by ornithologists; they are entirely confined to the Americas and to some of the off-lying islands of the West Indies. Some of the tropical hummers build



A YOUNG CEDAR BIRD

Fig. 3.—This very unusual picture shows the nestling at the time it leaves the nest. It will stand on its perch in the quaint attitude here shown for upwards of half an hour.

very remarkable nests, and many of these are figured in a work on Humming-birds, published a number of years ago by our distinguished ornithologist, Mr. Robert Ridgway.

The Ruby-throat is easily reared as a pet, and some time ago I found a single young one in a nest that had been built in an oak in a piece of woods in southern

Connecticut. Upon taking it home, I experienced no trouble in getting it to drink water from a teaspoon, the former having been well sweetened with sugar. When being fed it would sit on one of my fingers, while I held the spoon with the other hand. At night it slept on the chandelier in the middle of the room, and the first thing in the morning it would fly down to a little glass vessel containing sweetened water which I had taught it to find. Later in the day it would fly out of an open window to visit the flowers of the red honeysuckle that grew luxuriantly over the broad porchway of our home. On one occasion, with a loud and rapid twittering, it flew into the room through the open window closely followed by a fine male bird of its own species—my captive being of the opposite sex; but it was not long after that when my pet responded to the "call of the wild" and flew away never to return.

Some of our Vireos build very beautiful and compact nests, more or less overlaid with material obtained by the builders from various plants and trees. A fairly good hand at this is our White-eyed Vireo, an example of which is given in Figure 5. I came across this nest in a hedge-way separating two fields, not far beyond the immediate environs of Washington. I simply tipped it down a bit, so as to show better the four little lovely eggs it contained, while my camera did the rest. Of course the owners of the nest were both present, and protested strongly against everything that I did, flipping, in their anxiety, from bush to bush close to their treasured home. I obtained all I needed in less than ten minutes' time.

whereupon I took my departure. The vireos were evidently much relieved, and apparently labored under the impression that their scolding had frightened me off—particularly as I had not disturbed the nest or stolen the eggs it contained.

Even the old-fashioned, rough-and-ready nest that our Song-sparrow builds has a charm for us, as in the first place it usually fills in our minds what constitutes a bird's nest; while, on the other hand, its builder, the first thing in the spring and all through early summer treats us to its most winning canto of rippling notes as it sits perched on some woodpile or rail-fence post down in the meadow.

Personally I have never taken the eggs from any bird's nest for a scientific or other purpose without experiencing a sense of having committed something bordering upon an unworthy act; and I shall never forget the intensely disagreeable sensation that took possession of me upon one occasion, when visiting a friend, and the latter's son came into the room holding his cap in his hands, in which were to be seen at least fifty eggs of the catbird, which he had collected in the neighborhood. I did not hesitate to express my opinion upon what such a wholesale robbery meant to the birds, and the loss it occasioned among the songsters of the future—not to mention the value of the species along certain economic lines.

That ventriloquist of the woodland brakes, our Yellow-breasted Chat, is another bird that constructs a rough-and-ready nest, such as is here shown in Figure 7. Once I came across one of these that had been built among the smaller twigs of a dogwood, not far above the ground. It



NESTS OF HUMMING-BIRDS

Fig. 4.—Humming-birds, so far as known, lay but two white, ellipsoidal eggs to the clutch, while no two species build their nests exactly alike. More than 500 species have been described, and some of them build truly wonderful homes.



NEST AND EGGS OF WHITE-EYED VIREO

Fig. 5.—In our bird fauna we have some 25 different forms of Vireos, and they all construct very dainty, not to say curious nests. The rim is attached to the forked twig selected by the bird, and thus it is suspended like a little open purse.

contained but two young, and I succeeded in getting a very good picture of it, which is reproduced in Figure 7. The two nestlings were just about to quit their home, and would, in a little while, be entirely able to take care of themselves. Alexander Wilson, in his American Ornithology, gave us altogether the best description of the notes of the Yellow-breasted Chat that has ever been committed to paper; I feel sure the reader will be glad to peruse the paragraph he left us, especially as the work of that famous writer and lover of birds is rarely in the hands of the average student of ornithology of today. So Wilson puts it this way when writing about this Yellow-breasted Chat of ours, and his description almost makes us hear and see the bird: "When he has once taken up his residence in a favorite situation, which is almost always in close thickets of hazel, brambles, vines and thick underwood, he becomes very jealous of his possessions, and seems offended at the least intrusion, scolding every passenger as soon as they come within view, in a great variety of odd and uncouth monosyllables, which it is difficult to describe, but which may be readily imitated, so as to deceive the bird himself, and draw him after you for half a quarter of a mile at a time, as I have sometimes amused myself in doing, and frequently without once seeing him. On these occasions, his responses are constant and rapid, strongly expressive of anger and anxiety, and while the bird itself remains unseen, the voice shifts from place to place, among the bushes, as if it proceeded from a spirit. First is heard a repetition of short notes, the whistling of the wings of a Duck or Teal, beginning

loud and rapid, and falling lower and slower, till they end in detached notes; then a succession of others, something like the barking of young puppies, is followed by a variety of hollow, guttural sounds, each eight or ten times repeated, more like those proceeding from the throat of a quadruped than that of a bird; which are succeeded by others not unlike the mewling of a cat, but considerably hoarser. All these are uttered with great vehemence, in such different keys, and with such peculiar modulations of voice, as sometimes to seem at a considerable distance, and instantly as if just beside you; now on this hand, now on that; so that, from these manoeuvres of ventriloquism, you are utterly at a loss to ascertain from what particular spot or quarter they proceed. If the weather be mild and serene, with clear moonlight, he continues gabbling in the same strange dialect, with very little intermission, during the whole night, as if disputing with his own echoes; but probably with a design of inciting the passing females to his retreat; for, when the season is further advanced, they are seldom heard during the night." Further on Wilson says that "while the female of the Chat is sitting, the cries of the male are



NEST OF THE SONG SPARROW

Fig. 6.—Most of our sparrows build a nest more or less like the one here shown; often the clutch of four eggs is heavily speckled, usually with some shade of brown.

still more loud and incessant. When once aware that you have seen him, he is less solicitous to conceal himself, and will sometimes mount up into the air, almost perpendicularly, to the height of thirty or forty feet, with his legs hanging; descending as he rose by repeated jerks, as if highly irritated, or, as is vulgarly said, 'dancing mad.' All this noise and gesticulation we must attribute to his extreme affection for his mate and young."

This account of Wilson's of the curious performances of the Yellow-breasted Chat reminds me of the description I gave along similar lines of the Mocking-bird, prepared at the request of the late Alfred Newton, F. R. S., which he published in his "Dictionary of Birds" (p. 584). In closing my description of that famous species, I said that "he is, as every student of nature knows, one of the most extraordinary songsters of the entire world's avifauna. As an imitator of the songs or cries of every other species of bird he has ever listened to, the Mocking-bird probably stands without a rival in the entire class; but in addition to this power, he possesses native notes of great purity, strength, energy and sweetness. To some degree, these latter resemble the notes of the Brown Thrasher, *Harporhynchus rufus*, but are of greater variety and far richer.

"For thorough appreciation, one should catch him upon a dewy morning just as the sun rises, and he flits to the top of some low tree to pour forth his medley of carols in soul-felt welcoming. This may be in some quarter of the sunny South, perhaps near the manor-house of some



THE YELLOW-BREASTED CHAT

Fig. 7.—These little fellows can already fly a short distance; their plumage at this stage is an olive green, which to some degree is protective.



HEAD OF QUEEN ANNE'S LACE

Fig. 8.—A well-known plant, introduced from the Old World, and now flourishing all over the Eastern States; wherever it is found it is the bugbear of the farmer.

broad plantation, where he can not only imitate any individual of the host of native songsters about him, but vary the strain with any of those familiar sounds heard about the house and barnyard. To see that little feathered being so brimful of ecstasy, replete with action and animation, drooping his wings, spreading his tail, so buoyant as hardly to be able to retain his perch, while the air is actually filled with his inimitable musical performances, is a sight not likely to be forgotten. Clearly, and with the greatest possible accuracy and rapidity, and with a mellow strength even exceeding the originals, he utters the notes and calls of twenty or more birds in succession, ranging all the way from the plaintive air of the Bluebird to the harsh, discordant cries of Jays, Sparrow-hawks, and even, with equal compass, the vociferations of an Eagle. Catching breath, and tossing himself lightly into the air above his perch, he alarms the entire feathered community assembled by his imitating the cries of a wounded birdling in the talons of a Hawk; this is followed perhaps by the crowing of a Cock or the

vociferous note of the Whip-poor-will, and the very incongruity appears to put his feathered listeners to shame at the hoax."

Passing from birds to some of the flowers we find in early summer, let us first glance at one of the most abundant and best known ones; I refer to the Wild Carrot, also known as Bird's Nest and Queen Anne's Lace.

This is a plant that often spreads over wide meadows and along dusty country roads, on both sides, for more miles than I would care to estimate. Neltje Blanchan introduces it in the following fashion when she says: "A pest to farmers, a joy to the flower-lover, and a welcome signal for refreshment to hosts of flies, beetles, bees and wasps, especially to the paper-nest builders, the sprangly wild carrot lifts its fringy foliage and exquisite lacy blossoms above the dry soil of three continents. From Europe it has come to spread its delicate wheels over our summer landscape, until whole fields are whitened by them east of the Mississippi."

It may be—and probably is—a pest in the eyes of the farmer; yet the flower or flowers of this abundant plant are admired by nature lovers from one side of the continent to the other. When reproduced the size of life, as it is here in Figure 8, few wild flowers indeed can excel it in delicate structure of the tiny flowers themselves, as they exist on the

plant and so well shown in my illustration. Now and then the Wild Carrot exhibits a single, central floret of a deep crimson shade, which is a very interesting fact. Then, too, as autumn comes on, the umbels of the flower-head become dry and dark, at the same time gradually curving upward towards the center. This forms, in time, a cup-shaped structure which, to the popular mind,

resembles the nest of some small bird; hence many call this Wild Carrot "Bird's nest." But why it should be called a "Wild Carrot" it is hard to say, as the plant is in no way related to any such species, and this has been proved over and over again by the plant cultivators of more countries than one.

As the woods warm up in early summer in certain of the Eastern and Middle States, there appears in the shadows of the trees a very beautiful blossom, of which I give a pretty illustration in Figure 10. Frequently it grows as a tall, loosely clustered rather conspicuous white flowers, each



THE CHICKWEEDS

Fig. 9.—During early spring and summer the pretty white flowers of this plant are sure to attract the attention of those passing them.

having a more or less sticky calyx. Its fringed, five-petaled flower is responsible for one of its popular names, as it is known as the Starry Campion. A pretty name; but what's in a name when this lovely flower is the cause of the death of scores of tiny insects that come in contact with its treacherous calices, all smeared over with their sticky exudation. Hence Campion is frequently known

as "Catchfly," although minute winged insects are by no means its sole class of victims, for the trap is equally dangerous to exploring ants. Indeed, the plant is fatal to more ants than to any of the winged forms, for the latter can alight direct on the harmless parts of the flower and thus avoid the danger, which the ant can not do. Neltje Blanchan, in commenting on this fact, says "An ant catching its feet on the miniature lime-twig, at first raises one foot after another and draws it through its mouth, hoping to rid it of the sticky stuff, but only with the result of gluing up its head and other parts of its body. In ten minutes all the pathetic struggles are ended. Let no one guilty of torturing flies to death on sticky paper condemn the *Silenes*!" *Silenes* for the reason that the scientific name for the Starry Campion is *Silene stellata*—it being a member of the Pink family; and it is not difficult to see a simple form of an average pink in its flower.

One of the first flowers to greet us in the spring and one that blooms along into early summer, is the dainty Giant or Great Chickweed—a fine example of which is shown in Figure 9. I collected this particular specimen in the environs of Washington, and it was flourishing in a shady angle formed by a big tree on one side and the trunk of a fallen beech on the other—an ideal spot for this species of plant, which we so frequently meet with in the recesses found next to the ground in nearly all of our forest trees. The soil is usually rich in such places, and the plant gets plenty of water from that which runs down the trunk during a heavy rainfall. One can not pass this species of Chickweed without noticing its pretty white flowers, so well shown in the accompanying illustration, set off by its dark green leaves and curiously branching stems. Sometimes the seeds of this plant find their way into some crotch of a tree, or into a hole formed by the loss of a limb—either being several feet above the ground. Then we have the pleasure of seeing a fine specimen of this species flourishing quite a distance up from terra firma, and often doing better than those on the ground. Once, in southern Maryland, I was passing through what was formerly a beautiful bit of forest, some twenty or more acres in extent. It had been burned over a few months before through the carelessness of a negro, who had set a pile of leaves on fire near a spring to "drive dem copperhead snakes away." It was a black and charred scene, but one little corner of it was brightened by a magnificent Giant Chickweed plant that was growing in the hollow of a broken-off tree-trunk some six feet above the ground. Its white flowers were made all the more conspicuous in the setting of the coal-black stump. These Chickweeds are also arrayed in the Pink family, along with the Starry Campion shown in Figure 9; and in this family we find, too, Bouncing Bet or Soapwort; the true Pinks; the Spurries; Pearl-wort; Corn-cockle, together with the wild species of Pinks.

This early summer season is a fine time for boys and girls to practice the taking of nature pictures with their cameras—not aimless snapshots, however, but well-considered subjects, properly timed and viewed from proper points. A good 5x7 view camera, armed with the best brand of films in use, is a serviceable instrument; but while I advise this kind of camera, it is only with the



CAMPION OR CATCHFLY

Fig. 10.—The sticky material on various parts of the flowers of this plant, which is classed with the pinks and their allies, causes the death of many visiting insects—especially ants.

thought that it probably is the best one for a beginner. Personally, I never use anything like it; on the other hand, I employ cameras of three different sizes, and arm them with instantaneous "dry plates." More than half the success in work of this kind is to select the correct point of view; to include all the desirable features on your ground-glass, and to use as small a stop as your subject will permit.

THE WORK OF THE FORESTER

AT a meeting of the board of directors of the American Forestry Association, held in New York on April 12, the work of the forester of the association was discussed and plans outlined for the remainder of the year. Ovid M. Butler, the association's new forester, submitted a report which was approved by the directors and which will form the general plan of his work during the summer and fall. This plan contemplates more or less concentration by the forester upon specific situations.

Mr. Butler pointed out in his report that in view of the many diversified fields inviting the activities of the forester for the association, he felt that most effective results could be accomplished by following a definite plan with definite objectives and departing from that plan only when urgent situations arise. Otherwise, he held, the time and efforts of the forester will be badly scattered and thinly spread over a broad surface, thus being unproductive of large or definite results in studying economic situations or in assisting in needed forestry developments of broad scope.

"From the many fields of activities open to us," said Mr. Butler, "I have endeavored to place my finger on the one or two of greatest possibility from the standpoint of broad national need. Considering the depleted character of the eastern forests and the rapid shrinkage now taking place in the southern forests, there can be no question but that the twenty-five million acres of cut-over forest land in the lake states and the forty million acres of similar land in the south must be classed as regions of outstanding importance in supplying our future needed growth. The possibilities of forest growth in these two regions are very great, but with the exception of one or two states, there is unquestionably less actual forestry being accomplished than in the eastern and northeastern and in the far western states. The need for a proper public conception of the economic aspects of forestry, for forestry education, forest laws and information on the forest growing possibilities of vast tracts of land suitable only for growing forests, is, I think, more highly concentrated in the lake states and the south than in any other parts of the United States."

Mr. Butler will divide his time between the south and the lake states as, in his judgment, will best serve to advance his objects. It is the plan to cooperate with local forest agencies in just as far as possible, assisting them in working out their larger problems and in bringing home to the public their economic interests as now affected or threatened by local and national forest depletion. The board agreed that the forester for the association should devote himself to problems and situations of large import rather than to general representation which must necessarily be of more superficial value.

The question of the forester's attendance at meetings was discussed by the board. Mr. Butler pointed out that practically all the forester's time might be spent in

representing the association at meetings which in one way or another were of a forest character, but that such a policy would preclude the accomplishment of the real purposes for which the forester should stand. The association's forester should, however, endeavor to attend meetings which are of special importance.

In discussing legislative situations and the opportunities for the association to be of great help in that direction, Mr. Butler in his report stated: "That leads me to suggest the desirability of strengthening the association's propaganda or legislative work. I have mentioned this to Mr. Ridsdale and I think we are agreed that we need to organize better for this work. We should not only maintain an up-to-date list of all forestry and allied organizations in the country but we should keep an index of practically all organizations, commercial and otherwise, whose interests dove-tail into the forestry situation in one way or another. We should have these organizations classified in such a manner that when any particular subject or measure needs legislative support, we can immediately put our fingers upon those organizations whose interests are most directly involved and whose support will therefore be most responsive to telegraphic summons or written communication."

Action by the board of directors on Mr. Butler's report also carries with it the working out of a definite legislative and editorial policy with respect to forestry. This will be done by a sub-committee of the board to be appointed to advise with the forester as his work develops. As to the need of such a committee, entirely aside from the formulation of definite policies, the forester's report stated: "Many matters are certain to arise from time to time on which I will want advice. Such an arrangement will be very helpful to me and to my work and it will establish, I think, closer contact with the board and the forester, a thing desirable from all standpoints."

In another part of his report, the forester stated: "Another subject I should like to touch upon, not in the way of a recommendation at this time but as something for us all to be thinking about, is the question of association affiliations. Forestry sentiment is developing very rapidly. Established organizations of all kinds are becoming more and more interested in forestry while new forestry associations are coming into being. There are today county, state and interstate forestry associations. I believe that the American Forestry Association should supply the machinery by which these and other organizations may unite their strength on forestry problems and function in a much larger and stronger way. I appreciate that the financial aspect of any affiliation plan must be very carefully considered, but if the association can offer something definite, if it can make a clear showing of advantage to the local organizations, I think we shall find the latter in a very receptive state of mind."

TREE SEEDS FOR FRANCE AND GREAT BRITAIN

ON April 6, the anniversary of the entry of the United States into the World War, Mr. Charles Lathrop Pack, president of the American Forestry Association, presented 100,000,000 Douglas fir seeds to France and Great Britain to be used in replanting the areas of France devastated by the war and the areas in Great Britain where her forests and woodlands were cut for war purposes.

On behalf of their governments, the seeds were received by His Excellency Ambassador Jusserand for France and by Mr. J. J. Broderick, counsellor of the British Embassy, for Great Britain. These representatives feelingly expressed their appreciation of Mr. Pack's gift. The presentation was made at the headquarters of the American Forestry Association. The seeds were made ready for shipment in 125 bags.

Declaring the seeds seemed to understand what was expected of them Ambassador Jusserand said:

"Once more America is coming to the rescue. We did not believe that our gratitude could be increased, but it will be by what you are doing.

"Of few things were we prouder than of our forests, well kept owing to the exertions of the pupils of our National School of Forestry at Nancy. The immense importance for a people that every citizen be a useful citizen, and every parcel of the national territory be of use, is now better understood. The existence of coal and oil does not depend on us; we can consume it, not make it. But the existence of forests depends on us, and what does that existence mean? It means well regulated waters which will insure the fertility of plains and valleys, it means renewable stores of heat and force, renewable timber for our houses, and a thousand other purposes. I say nothing of what it supplies for mere enjoyment: shade, beauty, quiet, the song of birds. The forest is the friend of man; man should be the friend of the



ONE HUNDRED MILLION TREE SEEDS FOR FRANCE AND GREAT BRITAIN

A gift made by Charles Lathrop Pack, president of the American Forestry Association, on the occasion of the anniversary of the entry of the United States into the World War. The ceremony took place at the headquarters of the Association.

forest; hence what we have long done on that line in France.

"Our forests suffered terribly from the war as some of you may have seen; where for centuries trees waved their green foliage nothing is left now but barren ground. As we must reconstruct our houses, so we are now trying to reconstruct our forests. And there your generous help comes in, most efficacious and welcome.

"Strange it may be, but surely providential, that in the same way as your boys took kindly to our population, American tree seeds take kindly to our soil. The results are wonderful; it seems as if those diminutive scions of the American stock understood that it is a question of a great and friendly country which should be helped with all speed; and trees from your seeds are conspicuous for the rapidity of their growth. They are in their way worthy representatives of you, kind-hearted Americans, toward whom our increasing gratitude will never fade."

Mr. Broderick in accepting the seeds for Great Britain said:

"By his gift of tree seeds Mr. Pack is aiding France to maintain her century old forest policy and encouraging Great Britain in making her newly adopted policy a success in the belief that the inspiration and example of these two countries will lead the United States to put a stop to the destruction of her greatly depleted forests, to replant her idle forest lands and to adopt a forest policy which will provide for the future needs of all her people."

In presenting the trees seeds to the French and British governments, Mr. Pack said:

"On the statue to Rochambeau in Lafayette Park, opposite the White House, are these words: 'We have been contemporaries and fellow-workers in the cause of Liberty.' This date, April 6, marks the day when the United States threw itself into the scales of warfare on the side of that cause of Liberty. I present these tree seeds to your governments in order that the millions of trees that will be born of them will keep ever new the memory of

your men and ours who gave their lives for that cause of Liberty.

"I give these seeds to France so she may grow one hundred million American trees. France needs these seeds to restore her forests and woodlands in the battle zones where they were cut down for war-time purposes or destroyed by conflict. The trees will be placed on her battlefields and will be perpetual memorials to the American soldiers who fought and bled there. They will be perpetual because France in her great wisdom has a forest policy which maintains steady production of lumber without decreasing her forest area. In this she sets the United States an example which we have not learned to follow but which we must follow and without delay.

"This forest policy of France made it possible for France and her Allies to win the great war. The United States must have a forest policy if she means to be safe from war defeat in the future. So these Douglas Fir seeds grown in French soil will provide timber for France for all future generations and her forests of American trees will forever remain as a memorial to the friendship of the two great Republics whose soldiers have fought shoulder to shoulder on the home soil of each.

"Since the war Great Britain has been quick to take up the scientific rehabilitation of her forest resources. Being close to the scene of conflict she cut until little remains of her famous wooded areas. War is a costly lesson but Great Britain is profiting by that lesson by pushing the rebuilding of her forests as rapidly as possible under the direction of the British Forestry Commission.

"Will America learn that lesson? It may turn out that, after all, these tree seeds will be in reality a gift to the American people, for seeing the great need after the great sacrifice your countries made, our own people will come to see that the millions of idle acres in their own country should be put to work growing trees as speedily as possible. If it should so turn out, your countries with these trees across the seas will have done a great service, the greatest service that can be done this country at this time."

OUR NEWLY ELECTED OFFICERS

THE election, by ballot, of officers of the American Forestry Association, was completed on March 25, and the tellers have announced the election of the following new officers:

President—Mr. Charles Lathrop Pack.
Treasurer—Mr. Robert V. Fleming.

Vice Presidents—Hon. M. L. Alexander, Mr. Henry C. Campbell, Mr. Fred C. Knapp, Mr. Everett G. Griggs, Mrs. Warren G. Harding, Dr. John Grier Hibben, Mr. Jesse M. Overton, Mr. Thomas H. Owen, Dr. Joseph Hyde Pratt, Mr. M. B. Pratt, Dr. J. T. Rothrock, Prof. Filibert Roth, Mr. Harvey N. Shepard, Mrs. John

Dickinson Sherman, Hon. B. H. Snell, Mr. Bonnell H. Stone, Mr. Hermann von Schrenk, Mr. Lou D. Sweet, Hon. John W. Weeks.

Directors—Mr. Elbert H. Baker, Mr. Robert P. Bass, Mr. F. W. Besley, Col. Henry S. Graves, Col. Wm. B. Greeley, Mr. George W. Sisson, Jr., Mr. E. A. Sterling.

OUR VANISHING WILD FLOWERS

By Winthrop Packard

THREE hundred years ago when the Pilgrims landed the resources of this great American Continent, then untouched by civilization, seemed boundless and inexhaustible. For centuries, in the main, they so remained. Only about fifty years ago came to us the first suspicion that they might be otherwise. Suddenly, as time is measured, it dawned upon us that there could be an end



Courtesy of the Arnold Arboretum.

KALMIA LATIFOLIA. A BRILLIANT BORDER OF KALMIA SET OFF BY THE SOMBRE GREEN BACKGROUND.

to the Bison, the beaver, the passenger pigeon. Now we know that they were not only going when we realized it, but that they were practically gone. You find people still searching for passenger pigeons, believing that they will be able to locate them and earn the reward offered, so strong is the delusion that it is impossible to so soon exterminate a once mighty species.

The same is true of our forests. It is inconceivable to the average man that we cannot go on in the old, happy-go-lucky way, sweeping all before us, replacing nothing and yet always having enough. Within less than half a century this condition has come to be recognized by the thoughtful and a remedy is sought. And now we are beginning to be very thoughtful about the future of our more beautiful wild flowers. For already over wide areas where they were once common, we miss them. Always they are the most beautiful and most en-

dearing species. We tramp to their accustomed haunts at the blossom season, our hearts full of their fragrance, our minds assured that they will greet us as of old—and they are not there. Perhaps the stream that watered them has been depleted, or the trees that sheltered them have been cut. More likely, we find the ground trampled where they were uprooted by someone who loved them not wisely nor too well, but only greedily.

There are those who love the wood rose and leave it on its stalk, who are indeed fit to be the friends of Emerson and Thoreau, but they are still far too few for the good of the wild life which they seek to protect and their voices as yet are those of prophets, crying in the wilderness, little heeded by the world of men.

The trouble lies in part in the greed of humanity, more in its carelessness, most of all in its ignorance. Its remedies would seem to be indicated in the reverse ratio. To save our vanishing wildlife we must educate, admonish, restrain—restrain where we must, admonish where we may, educate always and persistently.

The people who find enjoyment in killing and destroying are numerous still, people whose innate impulses in the open leads them to kill the bird, to cut the tree, to pluck the wild flower through some inborn desire for possession which can be gratified in no other way. But there is a far larger and we must believe growing class who get value, not from shooting the bird but from watching it live and studying its habits, by associating with it alive rather than gloating over it dead, who would rather know the tree and enjoy its shade than to cut it and to whom the living, growing wild flowers give



THE BEAUTIFUL FLOWERS OF KALMIA, OR MOUNTAIN LAUREL, ARE BORNE IN LARGE DOME-SHAPED CLUSTERS OF EXQUISITE PINK TO WAXY WHITE.



EVERYONE LOVES TO HUNT THE SHY ARBUTUS IN THE EARLY SPRING WOODS AND ITS HIDING PLACE BENEATH THE LEAVES IS OFTEN DIVULGED BY THE INTOXICATINGLY SWEET ODOR OF THE BLOSSOMS.

joy and comfort that no plucking or grasping possession could ever produce. Some happy day the world will have moved forward to the point where all will



CLAYTONIA VIRGINICA, APTLY CALLED "SPRING BEAUTY"—A LUXURIANT CARPET OF FRAGRANT BLOSSOM IN THE WOODS.

agree with Emerson and understand his point of view, will wish to know the birds without a gun and to leave the wood rose on its stalk and it will be fortunate if the birds and the wood roses remain to be known and loved.

Certainly no present or future regrets or self restraint can bring back to us vanished species. We must practice restraint or restoration right away or it will be too late. Fortunately, unlike the passenger pigeon, the Eskimo curlew, the Labrador duck and some others, our wild flowers have not yet vanished except from certain restricted areas. They are merely vanishing. We can



PINK LADY'S SLIPPER (*CYPRIPEDIUM ACAULE*). LOVELIEST OF THE LADY SLIPPERS, IT IS FOUND IN PROFUSION IN SWAMPY OR WET WOODS.

hold them where they are, bring them back to areas once tenanted, now barren, if we will.

The Pilgrims found and loved the arbutus, naming it "the May" in fond memory of the Hawthorne hedges at home, always white and fragrant at the mayflower season. Today you will go far from Plymouth Rock before you will find Plymouth mayflowers. Their alluring scent still make the remoter portions of Pilgrim land worth visiting in May, but their former abundance is greatly reduced even miles away from "The Rock."

One of the sights of the Arnold Arboretum, that great outdoor museum of growing trees and shrubs, is the great bank of mountain laurel that shines with such wonderful beauty against the dark background of hem-



Courtesy of the Arnold Arboretum.

TWO LOVELY VIEWS IN THE ARNOLD ARBORETUM—THAT FAMOUS SANCTUARY OF TREES AND FLOWERS. ABOVE, A ROSE-BORDERED WALK ALONG THE MEADOW ROAD, AND BELOW, THE LOVELY AMERICAN SUMMER-FLOWERING ELDER, BLOOMING AT THE EDGE OF THE LILY POND.



BLOODROOT (*SANGUINARIA CANADENSIS*)—ONE OF THE MOST STRIKING AND EARLIEST OF THE WILD FLOWERS OF THE WOODS—A FAMILIAR SIGHT WITH ITS WAXY BLOSSOMS AND DEEP RED STEMS.

lock hill. That it exists within the city limits of Boston is due, of course, only to the fact that it has police protection. Let that vigilance be relaxed for but a single day in blossom time and let word go forth that it might be plucked with impunity, it is easy to believe that neither root nor branch would be allowed to remain.



THE SPRING ORCHIS (*ORCHIS SPECTABILIS*) IS ONE OF OUR LOVELY NATIVE ORCHIDS, WHICH MUST BE PROTECTED AGAINST EXTERMINATION BY MISGUIDED ENTHUSIASTS.

To the perfectly human desire to get possession of beauty would be added also the perfectly human competitive instinct, to get it before the other fellow did—and it would be got while the getting was good.

The New England country in regions more remote from large populations still shows massed mountain sides of laurel, but the human desire for beauty and the competitive instinct are having their effect on these. The unprotected laurel within easy reach of any large city is gone and now the automobile is placing that of the slopes of Wachusett, of the mountains of southern New Hampshire, of Vermont and of the Berkshire Hills within the reach of thousands. The automobile now carries the city to the country and brings it back again between dawn and dark. Too often, alas, it comes back



LUPINUS PERENNIS, OR WILD LUPINE—THOSE TALL AND GRACEFUL STALKS OF RICH BLUE.

laden with what was on the mountainside beauty superlative, but is when it reaches the city only a tattered remnant to be too often consigned to the ash can on arrival.

The thought here should not be misunderstood. The love of the wood rose is rightfully in all our hearts. That city motor cars can take city dwellers to it in a day is a boon that the genius of modern civilization has lately conferred and that is worth much. It is necessary that with privilege should go the power of self-restraint that teaches all not only to love beauty but to seek possession of it only in moderation that others, as worthy lovers of it, may equally enjoy it.

How to bring this about where wild flowers are left

to us is the problem before the flower protectionists, the problem that conservationists meet at every turn and that we must solve or the desert will inevitably follow our present civilization and overtake it as it has those of the past.

One's first thought is that we may save the wild flowers by cultivating them. Without doubt thousands of people have been moved to try this with trailing arbutus. Few, indeed, have succeeded. Transferred to good garden soil, carefully watered and tended, enriched with fertilizer or whatever you please the Mayflower plant obstinately refuses to respond to kindness and wilts and dies as if transplanted into unmoistened dust. Scientific investigation carried on by the United States Department of Agriculture of late years has shown the reason for this. It was found, for instance, that that most useful wild fruit, the blueberry, luxuriates only in soil so acid that garden plants simply die of starvation when placed in it. As the blueberry placed in ordinary alkaline garden soil invariably dies, so does the arbutus.

times of our most loved and commonest wild flowers. Search the botanical textbooks from the old-time standard of Asa Gray down to the present day and you will find the fruit of the mayflower invariably referred to as a carpel—a dry indehiscent pod—yet Frederick Colville found in his researches hundreds of mayflower fruits in a single afternoon on a New Hampshire hillside and everyone of them was white-fleshed and edible and as juicy as a strawberry, no pod at all, but an enlarged, fleshy receptacle. The ants, lovers of all sweets, harvest these berries and bear them to their underground sandhill nests, whence the sprouting seeds send forth

more trailing arbutus to gladden the



HEPATICA—EARLIEST AND DAINTIEST FLOWER OF SPRING. DELICATELY SHADED FROM LILAC WHITE TO PALE PURPLE AND LIGHT VIOLET; AND ABOVE, IN THE OVAL, AN EXQUISITE CLUMP OF GAY MOUNTAIN LAUREL.

tus. Moreover, it is found by microscopical examination that a nitrogen fixing bacteria, such as that which in the root tubercles of the clover nourishes the plant, occurs also with the blueberry and mayflower, both inhabitants of acid-soil barrens. The proper conditions for the plant being fulfilled the very acid soil and the special root haunting bacteria, being supplied, the mayflower may be transplanted or raised from seed and will thrive.

It might be told in passing that these experimental investigations by the Department of Agriculture gave us an interesting sidelight on how little we know some-

hearts of flower lovers.

It may readily be seen that the cultivation of the mayflower by transplanting or raising from seed is a difficult if not impossible proposition for the average gardener. There remain two other methods, the first the prohibition or at least the restriction of the privilege of picking it. In all places near large cities the wild things of the woods become a commercial proposition. While the average woodland visitor loves the mountain laurel for its conspicuously beautiful flowers and takes personal toll of them—a toll which is harmless in a single case, but which merges in complete destruction when one motor load of visitors follows another all day long—the florist sweeps the hill-sides bare of branches at all seasons that he may sell the evergreen leaves for decoration. Thus love of flowers and love of money combine to make deserts of the hill-sides that in June were unbelievably beautiful with pink bloom and throughout the rest of the year were brave with unflinching green. As with the laurel so with the holly, the flowering dogwood, the evergreen ferns. Commercialism is making them rare throughout great areas, will in the end extirpate them unless the spirit of conservation is roused in the community and conquers. Some-

how, some way, we must protect these lovable and desirable plants from ourselves if those who follow us in the world are to have the pleasure of knowing them.

Of the herbaceous wild flowers, concerning which the nature lover needs to feel alarmed, the list might well vary with the locality, but one can name many on which all would agree, such as the arbutus, the fringed gentian, pink mocassin flower, bloodroot, hepatica, columbine and spring beauty. These are flowers, singularly attractive to all and particularly susceptible to destruc-



FRINGED GENTIAN (*GENTIANA CRINITA*) IS PROPAGATED ONLY BY SEED AND THIS BLUE BEAUTY SHOULD BE PROTECTED AND SAVED FROM RUTHLESS DESTRUCTION.

tion of the plant by picking that is rough or reckless. The fringed gentian, for instance, is an annual propagated only by seed, growing only in favored localities and blooming only for a few short weeks in each year. Sweep a given locality clear of the blossoms just once and the plant, thus deprived of seed production, fails so far as that location is concerned forever more. It seems sometimes as if the individual plant realized this. A handful of gentians plucked and placed in water, will continue their bloom and the effort to mature seeds long after

many other species would have withered and been thrown away.

Of the power of many annuals to survive excessive picking we need have no fear. Asters, goldenrod, daisies, buttercups seem to defy destruction. Flower lovers who enjoy getting great armfuls in bloom may take their pleasure with these without fear of unfortunate results, but other rare and even more beautiful flowers like the gentian must be protected or we will lose them forever.

So much for the disease. The remedy must begin and very likely will end in education. Law may help, but without an enlightened and aroused public opinion behind it law fails of enforcement and is useless or worse. Education alone can provide the enlightenment.

The Sanctuary movement for the preservation of wildlife is now rooted and thriving in this country. The concrete expression of the idea began with the desire to save the birds. Bird sanctuaries established during the last 20 years by the federal government alone now number seventy or more. Theodore Roosevelt, wise and efficient in so many ways, was our great bird sanctuary



Courtesy of the Arnold Arboretum.

DAISIES—SPREADING A CARPET OF WHITE. VALUED FOR THEIR EARLY WHITE IN SUMMER FIELDS, AND THEIR CHEERY SUCCESSION OF VIGOROUS BLOOM.

President. Under his proclamation most of these were established, beginning with the few acres of Pelican Island on the Indian River in Florida—the first one—and increasing in size and area in the Yukon Delta in Alaska to about the size of the State of Massachusetts. Roosevelt, great in so many ways, was preeminently a leader in his love for wild-life and did a wonderful work in teaching the nation how to protect it. These sanctuaries have been an actual and a spiritual power for the protection of birds whose value the world has come to recognize.

States also have taken up the movement, Massachusetts having a dozen or more State bird and game reservations, some owned by the State, others consisting of privately - possessed land over which the State extends its protecting authority. Perhaps the most widely known of these is the Moose Hill Sanctuary of the Massachusetts Audubon Society at Sharon, Massachusetts. This, established some five years ago for the protection of birds, now through the cooperation of the Massachusetts Society for the Protection of Native Plants, protects the wild flowers as well. In fact, the balancing value of all wild life is here recognized and it is realized that to protect one form the others must be equally protected. If such protection for the wild flowers and other desirable forms of wild life could be extended to

all bird reservations their value to the birds and to mankind would be greatly enhanced. At the Moose Hill reservation not only native rare and interesting

species are protected, but many others which were not native, but to which the environment is favorable have been introduced and have thrived. The warden in charge protects the trees and shrubs, the wild flowers and the harmless other wild creatures of the woods as well as the birds. Proof that the sanctuary idea appeals to the public which is eager to observe, to learn and to carry the good idea elsewhere, may be found in the fact that in the single month of May nearly a thousand people visited the place.

Not every city can have an Arnold Arboretum with its wonderful collection of trees and shrubs from all over the world, cultivated and labelled and free to public inspection at all times, but near every city can be established a wild-

life sanctuary where wild flowers will be adequately conserved and increased for the pleasure and enlightenment of the public.

Patient and persistent education in regard to our wild flowers and the need of protecting them will bring this about. Two societies entirely altruistic in aims and methods are at present working wisely and diligently with this great end in view—The Society for the Protection of Native Plants, and the Wild Flower Preservation Society and they deserve the support of all nature lovers.



Courtesy of the Arnold Arboretum

GREAT CLUMPS OF KALMIA, OR MOUNTAIN LAUREL,
AT THE FOOT OF HEMLOCK HILL.

THE AMERICAN TREE

Plant we our Native Tree,
Most noble Hickory,
Best tree of all;
Strongest in forest shade,
Towering unafraid,
Best tree God ever made,
Best fruit of fall.

Earth-mother fold to Thee
This, thy young daughter-tree,
Fold to thy breast;
Dress her out green in spring,
Call the sweet birds to sing,
Colors in autumn bring,
Gayest and best.

Nourish her, native sod,
Bring her up well, O God,
Worthy of fame;
Now, in thy tender care
Leave we this daughter fair,
Breathing to Thee a prayer
In His dear name.

(The above lines, suitable for school memorial tree planting exercises and to be sung to the tune of "America," were written by Marta Scott Conser, of Memphis, Tennessee, long known as a writer on conservation and forestry, and an earnest advocate of the planting of all kinds of nut trees wherever and whenever possible.)

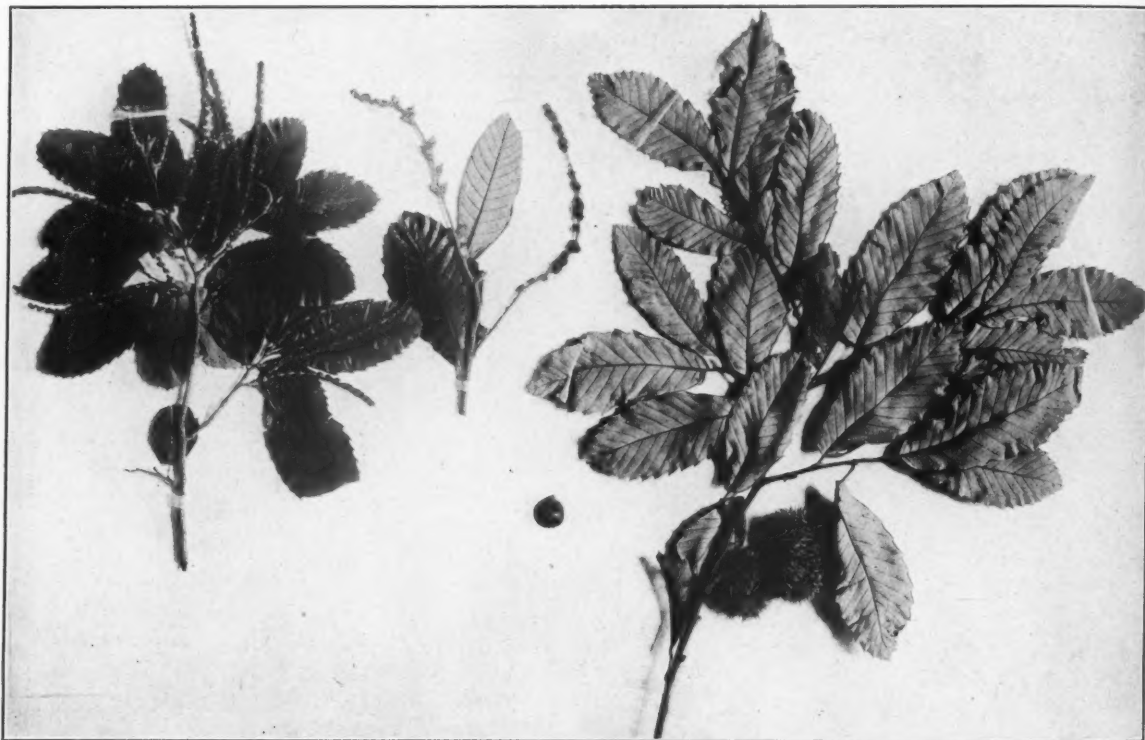
A NEW CHINQUAPIN

By George B. Sudworth.

Dendrologist, United States Forest Service

THE true chestnuts, species of the genus *Castanea*, grow naturally in the temperate portions of eastern North America, middle and southern Europe, northern Africa, western Asia, central and northern China, and Japan. About four distinct species are now known to occur in all these regions. The common chestnut-tree of Europe, *Castanea castanea*, was the first tree of the genus that became known to science, and is usually referred to in the books as *Castanea sativa*, *C. vulgaris*, and *C. vesca*, all of which are, however, antedated by the oldest name, *Castanea castanea*. The chestnut-tree of China, a large

tree species, the common chestnut (*Castanea dentata*), is sometimes 100 feet high and 3 or 4 feet in diameter, its range being roughly from Ontario to southern Michigan and southward to Delaware, southern Indiana and Illinois, and thence in the mountain sections to Georgia, and to western Florida, Alabama, and Mississippi. The smaller tree species (*Castanea pumila*), commonly called Chinquapin, is 25 to occasionally 40 feet high and 2 to sometimes 3 feet in diameter. It is distributed from New Jersey and southern Pennsylvania to Florida and westward to Oklahoma and eastern Texas. The fourth



CASTANEA PUMILA ASHEI SUDWORTH

A new variety of chinquapin Staminate (male) flowering branch (left); pistillate (female) flowers (center); nut and fruiting branch (left). Illustration about one-third natural size.

tree, and of Japan, a small or medium-sized tree, are variously considered distinct species or varieties of the European chestnut, the Chinese tree being known technically as *Castanea bungeana*, and the Japanese tree as *Castanea castanea pubinervis*. So little is now known of these trees, at least of the Chinese Chestnut, that a satisfactory conclusion has not yet been reached regarding their botanical status.

The second, third, and fourth species of chestnut now known are natives of eastern North America, two being trees, and the fourth being a shrub. The larger of the

species, the Dwarf Chinquapin (*Castanea alnifolia*), growing from North Carolina to Georgia, is a low shrub which forms thickets by running roots. An arborescent variety of this shrub, recently described as *Castanea alnifolia floridana* Sargent, and locally called Chinquapin, is more often a shrub, but in Florida it sometimes becomes a tree 30 or 40 feet high and 8 to 12 inches in diameter, its general range being in North Carolina, Georgia, Alabama, Florida and Louisiana.

In the coastal plain of southeastern United States occurs another arborescent chinquapin that appears to be differ-

ent from the common chinquapin (*Castanea pumila*), to which it seems to be related. My attention was called to this form by W. W. Ashe, of the Forest Service, who has studied the living plants for a number of years and collected a large series of specimens from North Carolina to Louisiana. This new form, which is not uncommon in the South Atlantic and Gulf Coast regions, has smaller leaves, shorter aments, and larger nuts, than the common chinquapin, and I am here proposing for it the name *Castanea pumila ashei*, in honor of its discoverer, W. W. Ashe. Its distinguishing characteristics are as follows: Occasionally a tree 10 m. in height, but commonly a shrub 2-4 m. high, not propagating by underground stems. When the flowers open the leaves are 4-7 cm. long, and when mature they are 5-8 cm. long, and 2-4.5 cm. wide, in outline being elliptic, oblong-ovate or frequently somewhat obovate, prevailing obtuse at the narrowed base and obtuse or abruptly acute at the apex, but sometimes, especially on fruiting shoots, lanceolate and pointed at the apex and much narrowed at the base; sharply sinuate-toothed, dark green and finally glabrous above, closely gray-pubescent beneath, except on the veins, but never soft-velvety, as in *C. pumila*, (none of the leaves ever becoming glabrous or glabrate), and marked with 10-18 pairs of prominent veins. Shoots of the season, and often the buds, are more or less gray-pubescent, at least at first. Staminate flowers continuous; when the open, which takes place during the last week of May in northern Florida, and the first week of June in eastern North Carolina, they are 6-10 cm. long, and 5-7 mm. thick; involucre scales canescent, ciliate, the style being scarcely 1 mm. long; involucre of fruit bur-like, 1-2.5 cm. thick including the 5-7 mm. long, branched, rigid, gray-canescient spines which as a rule, are not sufficiently dense to completely conceal the involucre, as they do in the case

of *C. pumila*; nuts subglobose, as wide as long. *Castanea pumila ashei* grows on high sandy lands or on the edges of sandy hummocks and swamps within the coastal plain from northeastern North Carolina southward to northern Florida, and westward to Urania, Wynn Parish, Louisiana; probably extending into southeastern Texas.

This plant differs from *C. alnifolia* Nutt. in the absence of root stock; and from *C. alnifolia floridana* Sarg., in being more pubescent, and in having somewhat larger fruit and nut, as well as considerably larger leaves, there being about two additional pairs of veins. None of the leaves of this variety lose their pubescence. The lower leaves on the shoots of *C. alnifolia floridana* invariably become glabrate and green beneath or glabrous, except for a few scattered hairs near the midrib, the same being true of the petioles and shoots.

It differs from *C. pumila*, with which it is associated along the upper edge of the Atlantic coastal plain, in its smaller and blunter leaves, usually obovate in form (those of *pumila* being lanceolate or oblong), and from 10-20 cm. long when mature, and 8-11 cm. long when the plant is in flower, clothed with very close, gray pubescence, not soft-velvety as in the case of *C. pumila*. It differs further from *C. pumila* in its more slender aments (those of *C. pumila* being 10-13 cm. long and 7-10 mm. thick), in having the involucre of the nut less densely covered with spines, which are stouter and gray-canescient, and also in its larger nut. This variety is possibly the *Fagus pumila* var. *serotina* of Walter (Fl. 233, 1788) who separates early and late flowering forms, but without descriptions. Type W. W. Ashe, May and September, 1909, Parmelee, Martin County, N. C. Specimens of this plant from Florida have been distributed by many collectors and it is well represented in herbaria.

A GET-TOGETHER MEETING

THE dedication of "The Roads of Remembrance," a three day meeting of leading foresters and lumbermen of the United States and the annual convention of Intercollegiate Forestry Clubs of this country and Canada, took place at Syracuse April 20-22 under the auspices of the New York State College of Forestry at Syracuse University.

Practically all forestry colleges in North America sent delegates. The Northeastern Retail Lumbermen's Convention and the meeting of the New York Section of American Foresters coincided with this gathering of the forestry clans. The New York State Forestry Association and other conservation interests were represented.

Colonel William B. Greeley, Chief Forester of the United States, and Charles Lathrop Pack, President of the American Forestry Association, were on the list of speakers. Deans and professors of colleges, presidents of large corporate interests, experts on everything from salesmanship to paper manufacture participated. There were business meetings, banquets and powwows in which the Chamber of Commerce took part.

The convention was a reflection of the growing interest in forestry and its contingent problems. It was a get-together meeting, a manifestation of the desire on the part of professional foresters and the big lumber interests to cooperate in the production, preservation and management of an essential national resource, the forests.

The dedication of the Roads of Remembrance took place on the main automobile route from Buffalo to New York between Mycena and Chittenango, April 21. It celebrated the beginning of a project of roadside tree planting which will extend across the state and will undoubtedly lead to the development of widespread highway beautification by the planting of trees. Already other sections of the state have taken up the idea and are preparing to beautify the roads with trees. The exercises were conducted by prominent men in public life, military, civic and religious circles.

The planting of the highway was in memory of those who fell in the world war. The accomplishment of the work was made possible through the cooperation of the State Department of Highways, the American Legion, the property owners along the route, donations from private tree nurserymen and the Forestry College. This living memorial is particularly fitting because it was along the tree-lined highways of France that the American doughboy lived, fought and died for an ideal. The beauty of the "Roads of Remembrance" and its extent will constitute a constant reminder of the heroism of our citizen soldiers as long as time endures, not in any particular community, but to the people through the state. It will be a comprehensive commemoration of the sentiment and patriotic sacrifice that contributed so materially to the salvation of the world in 1918.

Editors of Country Denounce Plan to

Pittsburg Post: The American Forestry Association, ever a leader in movements having for their end the protection and restoration of our timber resources, is at the head of the present fight. Having members in every state, it is an organization of no little influence, and the public may rest assured that, against opposition from so powerful a society, the advocates of the obnoxious change in the Forest Service will have no easy time.

Louisville Courier-Journal: Much good will be done by the publicity batteries of the American Forestry Association, turned mercilessly upon the bills under which the Forest Service would be taken out of the Department of Agriculture and put in the Department of the Interior, and under which the resources of Alaska would be made available to exploiters. The more that is said about the attempted raid upon forestry and upon forests, through Congress, the less the probability of its success. The American Forestry Association says a good deal.

Cleveland Plain Dealer: Secretary Fall, prickling with resentment because of the earnest efforts of American conservationists to prevent the transfer of forestry control from the Department of Agriculture to the Interior Department, complains that he is the target of propagandists. The Secretary is absolutely correct. There is a nation-wide propaganda against the transfer. It is significant that practically all the propaganda is in opposition to the change. Those who advocate the transfer have refrained from trying to convince the public. Their incentives are political, and they have hoped that political arguments would be sufficient to persuade Congress. It is not unlikely that they would have been sufficient had it not been for the propaganda which has been disseminated by the American Forestry Association. There is good reason to hope that aroused and enlightened public sentiment will prevent the backward step which has been contemplated. Without the propaganda this sentiment could not have been created. The campaign to save the forests is an instance of propaganda at its best.

San Francisco Bulletin: Reports from Washington indicate that Secretary Albert A. Fall desires to reabsorb into the Department of the Interior the United States Forest Service which was rescued from it by the Department of Agriculture in 1905. It is now proposed to disrupt that service from the proved and sympathetic association with the Department of Agri-

culture under which its remarkable progress was achieved, and to revert its control to the department under which its efficiency became so apparent that even that department itself was glad to relinquish it without a struggle. Therefore, any measure whereby the Forestry Service might be dissociated from the Department of Agriculture and reestablished under another department that has already demonstrated its inability to control it, would be an alarming step in any process of departmental reorganization that may be attempted.

Albuquerque Journal: Fall demands that the Forestry Service be taken from the Department of Agriculture and turned over to him. The demand is unreasonable and can have no good motive behind it. Conservation and reforestation are agricultural processes. The administrative functions are professional. There is no justification for the proposed change.

Southern Agriculturist: Farmers are just beginning to realize what forest conservation means to them, and no other department of government is so well fitted to handle forestry work, or can so fit it into the national life, as can the Department of Agriculture. Farmers should let their congressmen and senators know in no uncertain terms that they do not wish the Department of Agriculture dismembered.

New York Mail: The move now made to transfer the Forest Service back to the Department of the Interior—"the real estate branch of the government"—is simply a counter-attack by those who would exploit the public domain for their own pockets. It must be defeated.

Lincoln (Neb.) Journal: Incidentally, the American Forestry Association has taken active steps against the change. If forestry isn't agriculture, it is asked, what is it? Perhaps a more potent reason for the opposition is the fact that Secretary Wallace is a whole hearted conservationist while Secretary of the Interior Fall is, well, from New Mexico.

Des Moines Register: The cold facts about the Alaska matter ought to be known. The Government has now at great cost built a railroad there and opened up the field. Everything is now ready for the interests Secretary Fall has always been identified with to step in and take over the timber and mineral wealth of Alaska, under the usual plea of "developing" our resources. With the *Register* it is not

nearly so much a question of the proper distribution of authority between the Departments of Agriculture and of the Interior as it is of letting a man like Secretary Fall have anything to do with the disposition of the great resources that may yet be conserved for the benefit of the whole people. Secretary Fall belongs to the frontier, and his standards are the standards of the frontier. "Let him take who has the strength and let him hold who can." He should never have been put in the Cabinet in the first place, and his power should now most certainly not be increased.

Newark (N. J.) News: Altogether, Mr. Fall's argument does not get him anywhere, unless it is in the position of criticism of "a co-ordinate department of the government," which he attributes to and condemns in others. He certainly contributes nothing constructive to the main question—how best to conserve the disappearing forests, vital to the welfare of this and future generations dwelling on our lands, public or private.

Boise Capital News: The West will be called upon to make a stand for or against the Forest Service, if we are to judge the movements under way to attack it. Forestry is doing admirably where it is. There is not one sound reason of any kind for the proposed transfer. It is neither good administration, good business nor good politics to undo Roosevelt's work.

Savannah Press: The Service has little business with the Department of the Interior. There are stalking horses behind the grab.

Grand Rapids (Mich.) News: Secretary Fall's proposal has met with what apparently is almost unanimous opposition on the part of those who heretofore have concerned themselves most with forest conservation, from the farm bureaus and from the majority of the agricultural interests. The Michigan state farm bureau is among those organizations protesting against the Fall proposal. The American Forestry Association, the premier organization for forest conservation, has entered a strong protest.

Idaho Daily Statesman: The quarrel over the proposed transfer of the Forest Service to the Department of the Interior from the Department of Agriculture will end when we are able to decide whether a forest is a crop or merely real estate. If we

Transfer United States Forest Service

decide that the Government has set certain areas aside for the purpose of growing trees and has gone into the tree-growing business on them, then it is proper to leave the Forest Service where it is, in the crop-growing department.

San Francisco Journal: The enemies of the forests are the private interests that seek to make a temporary present profit out of their destruction. Their arguments for the marketing of the timber are unsound because a little temporary relief today followed by a famine tomorrow is no benefit.

Chattanooga Times: The chief and most conclusive argument against the proposition to transfer the government Forest Service from the Department of Agriculture to the Department of the Interior was offered the other day by representatives of the American Forestry Association. "To do that," said Col. Henry S. Graves, formerly chief of the Service, "would simply mean two forest services for the growing of forest crops is the business of agriculture. Such a transfer would, therefore, mean duplication of effort and loss of efficiency."

Daily Oklahoman: There is no reason to conclude that the forests would be handled better by the present Department of the Interior than by the Department of Agriculture, as constituted at this time.

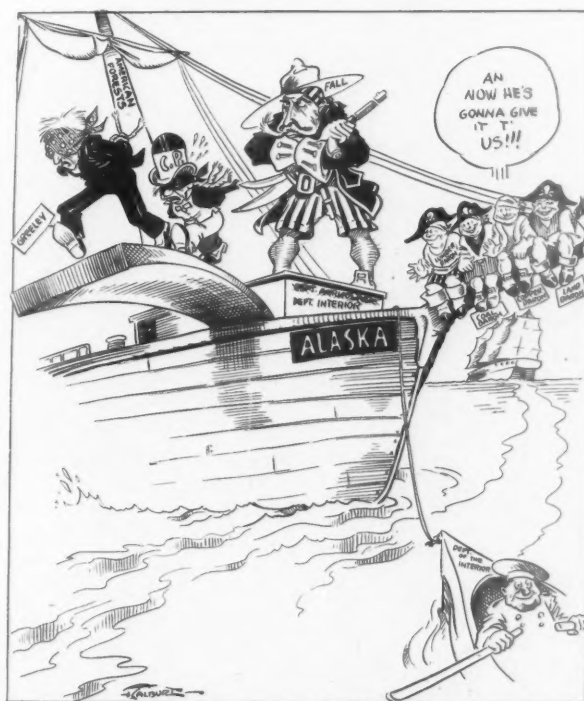
Sacramento Bee: For one thing is certain—the people are determined that no desecrating hand shall be laid on what remains of their once notable public domain. Nothing is to be gained by the proposed change, and much might be lost.

St. Paul Pioneer Press: There is little to be said about the transfer of the United States Forest Service from the Department of Agriculture into that of the Interior, as advocated by Secretary Fall, except in protest. Not a single potent reason has been advanced for a change.

Kalamazoo Gazette: Michigan's state farm bureau has just addressed to the sen-

ators and representatives of the state a protest against the proposed transfer of the United States Bureau of Markets and the Forest Service from the Department of Agriculture to the Department of Commerce and the Interior. The United States Government functions merely as a trustee in the administration of the country's agricultural and forest interests, and in the face of such pronounced opposition to a change like the one now proposed some very material arguments in favor of the transfer will have to be forthcoming—and so far they have not been given—before it will have a chance of attaining any measure of popularity.

"WALKIN' THE PLANK"



Talbot—For the Scripps McRae Alliance Papers.

Pueblo Journal: Pueblo is in line with many other communities in objecting to the passage by Congress of the proposed bill providing for transfer of the national forests from the Department of Agriculture to the Department of the Interior. Why make a change when the forests are handled so admirably?

Cincinnati Post: The forests seem to be doing well, treated as they are as crops instead of real estate deals. Who aside from Secretary Fall wants them changed over from crops to real estate?

Syracuse Post Standard: Secretary Fall would not have the confidence of the forestry associations. It is not objection to the Interior Department, but to the head of that department that stirs them.

Bangor (Me.) Commercial: We see no reason for this action and many reasons why it should not be carried out. There is no occasion to centralize the various interests of Alaska and many will see in the attempt another effort to turn the riches of Alaska over to private interests for the exploitation of this rich territory.

Christian Science Monitor: The lid has been taken off, and the truth about Alaska is being told. That is the solvent. Foremost in the organized campaign of education which is being carried on in behalf of Alaska is the American Forestry Association. Today Alaska is a vast storehouse, the ownership of which is vested in the people of the United States. Its riches should not be made the pawn of politicians and land-grabbers.

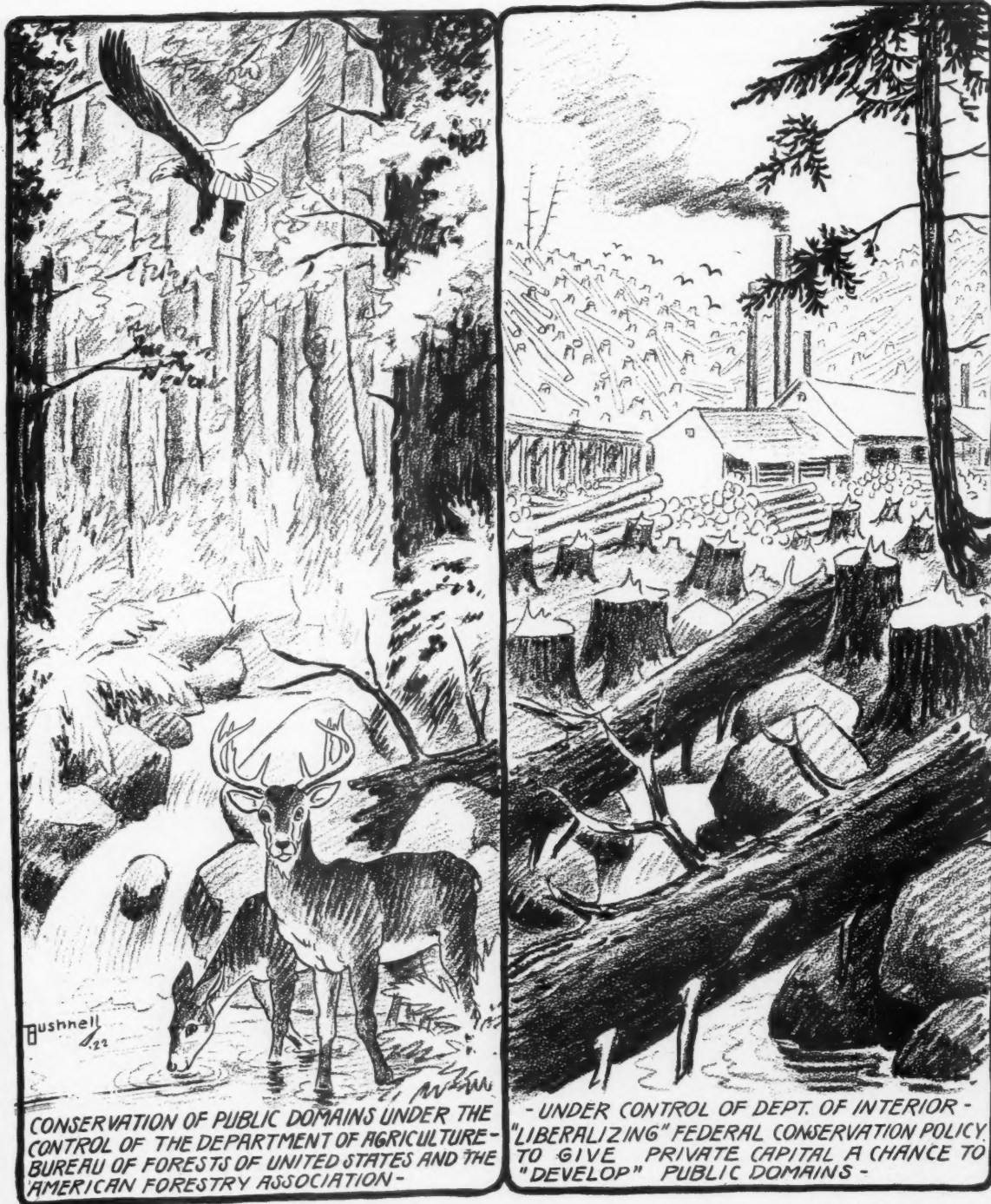
Portland (Ore.) Telegram: Until taken over by the Department of Agriculture the National Forests were at the mercy of politicians. Under that department forest preservation and rehabilitation has made all the growth it ever has made.

Santa Fe New Mexican: The newspapers of America are almost a unit in condemning the proposed transfer of the Forest Service.

Grand Island (Neb.) Independent: Commercialism is now attempting to brush aside the Roosevelt caution, and to exploit the comparatively newer region of Alaska for its own individual profit.

Washington Herald: One of the great constructive achievements of President Roosevelt appears in danger. Forestry is doing admirably where it is. There is not one sound reason of any kind for the proposed transfer. It is neither good administration, good business, nor good politics. The forests should remain under the present direction.

WHICH SHALL IT BE?



BUSHNELL—For Central Press Association.

ONE OF THE CARTOONS ON THE FIGHT FOR THE NATIONAL FORESTS

So widespread has been the newspaper comment on the effort to take the National Forests from the Agricultural Department and place them under control of the Interior Department that many newspapers and magazine cartoonists have contributed their ideas to the fight. The above by Bushnell, for the Central Press Association, is one of the best.

PENNSYLVANIA FORESTERS MEET

The first meeting of the Pennsylvania Branch of the Society of American Foresters was held at Harrisburg, March 10, 1922. Of the 39 members of the Branch Association, 29 were present or an attendance of nearly 80 per cent. During the afternoon by-laws were adopted and the following program was carried out in full with brief discussions of each paper:—

National Forestry in Pennsylvania—L. L. Bishop. Some Special Planting Problems in Pennsylvania—Prof. Geo. S. Perry. The Development of Wood Technology During the World War—Prof. G. R. Green. An Effective Forest Fire Organization—Geo. H. Wirt. Following a banquet a business and social meeting was held. It was decided to hold a stated meeting each year on the last Friday in February and a summer field meeting in July.

The meeting was addressed by Dr. J. T. Rothrock, Honorary member and Prof. H. H. Chapman, member of the New England Section. J. S. Illick read an appreciation of Dr. Rothrock calling attention to his long life of service to forestry in the country and especially in Pennsylvania, and expressing regret at the retirement of Dr. Rothrock from the Forestry Commission of Pennsylvania.

Resolutions protesting against the proposed transfer of the National Forests in whole or in part, from the Department of Agriculture to the Department of Interior were adopted.

The following officers were elected:

Chairman—Hon. Gifford Pinchot.

Vice Chairman—John Foley.

Secretary-Treasurer—J. A. Ferguson.

THE BIOLOGICAL SOCIETY

The proceedings of the Biological Society of Washington are unique in the scope of subjects published upon. Volume 1 was issued between 1880 and 1882 and the present volume (35) contains the same great variety of subjects written by world authorities. All forms of animal and plant life are discussed and the entire world is covered. A bulletin, No. 1, (1918), includes a brief history of the study of Natural History in the District of Columbia, dating back to 1608. Interesting facts included are—an account of the earliest discovery of bison as eastern North America was near if not in the District of Columbia, lists of the plants and animals of the District of Columbia, a guide and maps to various interesting regions and much historical data. The price of this bulletin is \$2.15 postpaid and can be obtained from the Secretary, Bureau of Entomology, U. S. Department of Agriculture, Washington, D. C.

A paper on the Birds of the Washington Region was issued in 1921 and lists 299 species with notes on migration, breeding, etc. This is for sale at \$.50. Many other

papers of general interest are listed in the index and price lists of the 35 volumes; such lists can be had on application to the Secretary. Meetings of the Society are held every second Saturday from October to May at the Cosmos Club.

SMALL TIMBER LOTS WANTED

Mr. Frank J. D. Barnjum, of Annapolis Royal, N. S., writes: "I am willing to purchase a few small timber lots containing a good growth of pine or spruce trees in different parts of Nova Scotia, located either on our main highways or bordering on the line of a railway, for the purpose of

saving and perpetuating some of the present forest tree growth. These lots will never be cut over, nothing but the over mature or dead or blown down trees being removed from time to time as becomes necessary, keeping them in perpetual forest growth, under the care of a competent forester, thus serving the four-fold purpose of an example in scientific forestry, a picnic ground or Forest Park for the people as well as an oasis in the landscape and a reminder of the beautiful forests that once existed in this province."

Address Mr. Barnjum, giving size, location and price of lot.

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CANADIAN DEPARTMENT

By ELLWOOD WILSON

The Forestry Department of Ontario has decided to make an aerial reconnaissance of its unexplored northern territory during the coming season and will spend at least 300 hours in sketching and photographing the timber resources of this little known region. More than anything else we have needed some accurate estimate of the timbered areas and the relative amount of timber on them and this will give some definite information on which a sound policy can be based. So much guessing has been done and so little accurate data has been at hand for timber estimates that the public have not known who to believe, the man who said our resources were inexhaustible or the man who said that we are on the verge of a timber famine. The amount of flying mentioned above should pretty well cover Northern Ontario during the coming season. Much credit is due Mr. Zavitz for his progressiveness and courage in trying out this new method on a large scale.

The Forestry Division, of the Laurentide Company, Ltd., has just succeeded in working out a method for getting the density of stocking of timbered areas from aerial photographs and can now get a much better and more accurate estimate of timber from these pictures than can be obtained from the ordinary ground cruise and do it in a fraction of the time and at much less expense. It has also worked out the way in which logs lie in a boom and can get a close estimate of the number which lie in a holding boom from an aerial photograph.

Mr. F. J. D. Barnjum, of Annapolis Royal, Nova Scotia, who is working for better forestry in Canada, has just added to his offer to farmers who plant trees in that Province, a number of prizes in his endeavor to encourage reforestation of land suited for growing trees. This is a very public spirited offer and should do a lot of good in interesting people in forestry and fire protection.

The Canadian Forestry Association has asked the Governments of the Dominion and the Provinces to increase their grants, which have been given ever since the Association was founded. No better use could possibly be made of Government money than to aid the Association's propaganda for better fire protection and better logging methods and for planting. The Association has been the means of arousing public opinion in Canada for the above objects and has now behind it a solid body of disinterested opinion which will be of great help to all the Governments in framing sound and sane forestry policies.

The session of the Quebec Legislature, lately prorogued, has done splendid work in amending and amplifying the forest fire laws. The suggestions for these laws came from Mr. G. C. Piche, Chief Forester. According to the new law, if a fire starts on a man's land and spreads to adjoining property, he is assumed to have set it and is responsible for damage caused unless he can prove his innocence.

No saw-mill can be established within a mile of any timber limit or any Crown Land without the written consent of the Minister of Lands and Forests. There is a penalty of ten dollars per day and the judge can order the mill demolished. Any person who does not take the necessary measures to prevent a fire from spreading from his land to another property is liable to a fine of from \$25 to \$2,500. Persons who pile lumber, logs, pulpwood along a railway line must after it is removed clear up any debris left. All persons wishing to travel in the woods, whenever the situation warrants it, in the discretion of the Minister, shall be obliged to obtain a permit from the local fire-ranger. No charge will be made for this. Any person who is duly employed for the protection of forests from fire, may, in the course of his duty, enter upon and cross over any lands. Laws have also been passed in regard to bonuses for reforestation and for the establishment of Municipal Forests, but unfortunately these are only permissive, and no amounts are fixed as bonuses. The laws only say "which the Lieutenant-Governor-in-Council may be pleased to fix or to authorize." If one may criticize the situation in Quebec at all, one would say that the laws relating to forests are as good as any in the country and in many respects far ahead of other sections of this continent, but that the enforcement of them is, to say the least of it, rather lax. This is due to two things, lack of sufficient personnel of proper training, and the other the general disrespect of certain laws, forest and game laws for instance, common to all new countries.

The summer meeting of the Woodlands Section of the Canadian Pulp and Paper Association will be held in the second week in July and will consist of a trip, probably by automobiles, through the Adirondacks. The tentative program is a visit to the plantations of the Delaware and Hudson Railway near Plattsburg, the New York State plantations and nurseries at Lake Clear; Saranac Inn and Saratoga, the operations of the Emporium Forestry

Company at Conifer, New York, and the lookout station at Chestertown, New York. The trip will occupy nearly a week and will be very interesting and instructive.

The Conservator of Forests for Western Australia, Mr. C. E. Lane-Poole, has owing to difficulties with his Government over timber concessions, resigned his office and will go to Papua, New Guinea, to report on its forest resources. He was a delegate to the Imperial Forestry Conference and is a very able man and will be a great loss to Australia. His leaving is much regretted. He was a graduate of the Forest School at Nancy, France and had done good work in South Africa. He is succeeded by R. A. Gibson, Forest Conservator from India.

A shipment of seven hundred pounds of Douglas Fir seed has been sent by the Dominion Forestry Branch to Great Britain for use in its reforestation scheme. This completes a shipment of 4,000 pounds of Douglas Fir, 3,000 of Sitka spruce and 100 of Western Hemlock.

The first issue of the Empire Forestry Journal has just been received and is a very creditable publication. For the first year it will be issued three times a year.

It is announced that already twelve counties have taken advantage of the plan of the Ontario Government for assisting municipal forests. These counties have acquired blocks of non-agricultural land from 100 to 1,000 acres and these will, in co-operation with the Forestry Service, be reforested.

The Dominion Forestry Branch, will probably for the first time in forest protection history, displace a number of its ground patrolmen and use airplanes. By arrangement with the Air Board, five F 3 machines, each with a carrying capacity of seven men and pilot, will be employed under Col. Stevenson, District Inspector of Forest Reserves. The work in spotting and reaching forest fires last season was so successful that the work is being much extended.

British Columbia will also use seaplanes in its fire protection work this season and many experiments will be tried, such as transportation of higher departmental officials to large fires, also expert fire fighters, transferring fire fighters from one fire to another, etc.

The nursery of the Dominion Forest Service will ship seedlings and cuttings for shelter belt planting in larger quantities than ever before, this year. Up to date sixty million trees have been sent out.

How Manufacturers Reduce Cost of Building 15%

*The Application of Mill Construction to Factory Building.
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MANY a business man has, in the last twelve months, come to realize the true meaning of costly factory buildings.

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It is, after all, not buildings so much as contents that consti-

tute fire hazard; and trying to reduce fire hazard by increasing building investment only piles up the overhead, and unnecessarily increases costs.

Engineers and architects, long familiar with the principle of fire-resistant, sprinklered "mill construction," yet obliged to limit its use because of lack of sufficient uniformly safe timbers with which to apply it, are now unhesitatingly recommending it.

MANUFACTURERS who have assumed that so-called fire-proof building is necessary to lower insurance rates are surprised to discover that thousands of the greatest mills in the country—sprinklered "mill construction" buildings, in which brick and wood have been intelligently combined into factories of great utility and adaptability—are paying today lower insurance costs than almost any other class of insurance risks and that their losses over a recent three-year period have averaged only 3½ cents per \$100.00 of insurance written.

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BOOK REVIEWS

Handbook of Field and Office Problems in Forest Mensuration, by Hugo Winkler and Elias T. Clark. (Wiley), New York, Price \$2.00.

This is a revised and enlarged edition of the original book, first published by the authors in 1915. It is designed especially for the needs of the student, the teacher and the practical man who desires detailed information on cruising, scaling, volume tables, and a knowledge of the growth and yield of trees. From a practical and educational standpoint the book presents many special features and is especially adapted for use by schools having either good or poor facilities for field demonstration, as the comprehensive Appendix lists a great deal of data with which to solve the problems. The contents include: Preliminary Measurements; Use of Graphic Methods; Log Rules; Preliminary Calculations; Construction of Volume Tables; Scaling; Determination of the Contents of Stands; General Growth Studies; Sample Plot Studies; Studies in Growth Per Cent; Yield Table Studies and, the Appendix, A Diagram for the Correlation of Methods in Forest Mensuration.

Studies of Trees in Winter—Annie Oakes Huntington. (Page), Boston, \$3.50.

Generously illustrated with color plates by Mary S. Morse and photographs by the author, this book is an interesting and valuable one, containing a description of the deciduous trees of Northeastern America in their winter dress. The key for identification is based largely on the contrasting characters of the buds, leaf scars and stems, which always mark the safest and surest course for those who wish to study and know the trees, and winter is surely the best time to acquire such knowledge. In his introduction to the book, Dr. C. S. Sargent of the Arnold Arboretum says: "A knowledge of trees, the ability at least to recognize and identify them, adds vastly to the pleasures of life. One who knows trees well meets them like old friends; each season invests them with fresh charm, and the more we study and know them the greater will be our admiration of the wonderful variety and beauty which they display in winter."

Birds of Field, Forest and Park, by Albert Field Gilmore. (Page), Boston, \$2.50.

Designed to stimulate among its readers a desire to make the acquaintance in the open of the birds it describes, this book certainly meets its own requirements. It is in no sense a treatise on ornithology, but is the more valuable in that it reproduces the atmosphere of the natural home of the bird in field, forest and park by describing the conditions under which each variety is found as well as their habits,

plumage, songs, etc. About one hundred and fifty varieties are described, including those most common in eastern North America. Latin names are avoided in its phraseology, as well as the purely technical terms which are unfamiliar to the layman. The volume contains the result of the author's actual observations of bird life covering a period of more than thirty years.

American Forest Regulation, by Theodore S. Woolsey, Jr., \$2.75, (Paper), \$3.00, (Cloth.)

A limited edition of this book is now ready for distribution and can be had by applying to the American Forestry Association, 1214 Sixteenth Street, N. W., Washington, D. C., or direct from the author at 242 Prospect Street, New Haven, Connecticut. The volume contains an introductory note by Dr. B. E. Fernow, and thirteen chapters, as follows: Introduction to Forest Regulation; Background of a Regulation Policy and Sustained Yield; Management and Administrative Subdivisions; Rotations—Technical, Silvicultural, and Economic; Financial Rotations; The Normal Forest; Regulating the Cut; Volume Methods of Regulation; Area and Area-Volume Methods of Regulation; The Cutting Cycle as a Determining Influence in American Forest Regulation; The Application of Regulation to American Forests; The Problem of Sustained Yield; Regulation of Forests Composed of Even-Aged Stands. Chapters 10 to 13 are by Professor Herman Haupt Chapman, of the Yale Forest School. The Appendix covers: A. (a) Forest Management in Nine European States (after Martin); (b) Financial Rotations (after Endres); B. Growing Stock and Yield, Harvard Forest; C. Example of a Preliminary Policy Statement for Inyo National Forest; D. Results of Forest Management in Savoie, France; E. Examples of Yield Calculations from National Forest "Management Plans," 1921.

Interesting Neighbors, by Prof. Oliver P. Jenkins. (Blakiston's), Philadelphia, \$1.50.

This book contains sixty-two nature stories for boys and girls—the sort of stories that small boys and girls relish so keenly. Prof. Jenkins writes of bees, bats and butterflies; of birds and flowers, even of toads, and whatever he touches he makes real and full of understanding. Nature gives to every time and season some beauties of its own which become a part of the life and experience of every child. Natural objects themselves, even when they make no claim to beauty, excite the feelings and curiosity of the young and occupy the imagination. The child mind is not educated by argument, but by

events, and Nature pleases, attracts, and delights while she instructs.

Watched by Wild Animals, by Enos A. Mills. (Doubleday, Page & Company), Garden City, \$2.50.

Replete with descriptions of nature characteristic of Mr. Mills' enthusiasm for his subject, this book appeals strongly to all admirers of animals, nature and good writing. The author says that when you go out purposely to observe wild animals in their native haunts, you are watched a great deal more than you watch. Almost invariably, he says, he has found animals' tracks in his wake as he traversed wild country, and through other signs known to the woodsman, he has known that the animals have been spying upon him, and he tells about it in his own inimitable way.

"The Valuation of American Timberlands," by K. W. Woodward. (Wiley), New York, \$3.00.

A study of the factors involved in estimating timber values is made by Prof. K. W. Woodward, head of the New Hampshire College forestry department, in a volume entitled "Valuation of American Timberlands," which has just been published. The book was written to supply information of practical value to investors, timber cruisers and students of forestry throughout the country.

Professor Woodward's book represents one of the few attempts that have yet been made to gather in one volume descriptions of the forest types of the United States and its outlying territories. The author draws not only upon his knowledge of New England forest conditions but upon a previous service with the United States Forest Service and a wide acquaintance with woodsmen over the country in depicting types of trees which range from the northern spruce, hardwoods and white pine of New England to the cypress of the Southern bottomlands, the chapparal of Arizona, the redwoods of the Pacific coast and the dipterocarps of the Philippines.

Agricultural Conference Report — The report of the National Agricultural Conference as made by Secretary of Agriculture Wallace to President Harding is to be issued as a public document. President Harding transmitted the report to the agricultural committee of the House, which presented it to the House with the recommendation that it be printed as a public document. The House approved the recommendation. The publication will contain the addresses delivered before the conference and the reports of the various committees. Persons who are interested may obtain copies of the document through their congressmen.

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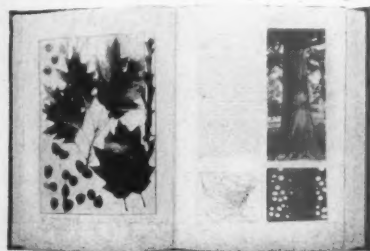
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Colonel Howard-Bury will give an account of the general conduct of the Expedition and its adventurous journey through country hitherto unexplored.

Mr. George Leigh Mallory, who led the Climbing Party, will describe the search for and discovery of a feasible way to the Summit of the Mountain.

Mr. A. F. R. Wollaston will give the results of his observations and collections of the extremely interesting fauna and flora of the region.

Dr. A. M. Heron will give a short summary of the outcome of his investigations in the geology of the region.

A map compiled by the Royal Geographical Society from the surveys of Major Morshead and Major Wheeler will accompany the book, and these Officers will also contribute an account of the manner in which the survey work was carried out.

The book will be illustrated by photographs taken by Colonel Howard-Bury, Mr. Wollaston and Mr. Mallory.

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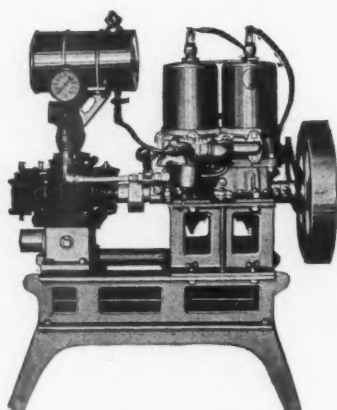
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like a growing plant. Next, the shearing
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there is little use in having a variety of
shrubs, or the variety that there may be in
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a year by a pair of shears. Again, the plant
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make a rule, however, a vastly better one
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der; or to give a better appearance to some
of the shrubs whose habits or growth are
not of the best; or, simply to remove
dead branches. Pruning is also often re-
sorted to for finer and larger flowers. In
the case of a few shrubs, notably lilacs,
a little cutting is a good thing for the
bloom; if it is a case of severe pruning—
such as is given to roses—the shrubs had
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in the ordinary shrubbery bed where gen-
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to do it depend on the kind of shrub and
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wood or an obstructing branch, can be done
almost any time. Pruning to improve the

bloom should be done, in the case of spring blooming plants, immediately after flowering; in the case of later blooming shrubs, in late winter or early spring. The first thing to do, however, is to become familiar with the different shrubs and to know what effect can best be secured with them; then a judicious use of the pruning shears will be of benefit."

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THE NEBRASKA FORESTRY ASSOCIATION

The wide and enthusiastic interest in forestry in Nebraska has culminated in the formation of a state forestry association, which was finally organized in March. T. W. McCullough, of Omaha, is president; Woodruff Ball, of Valentine, long identified with forestry in Nebraska, is vice-president, and Mrs. J. H. Corrick, of Palisade, is secretary. Hopes for success and real achievement go with the infant organization in its stated program to stimulate planting in Nebraska, and an appreciation of forestry and what it means to the people of the state.

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MORE FORESTERS NEEDED

More technically trained men are needed in government forestry work is the statement of District Forester George H. Cecil of Portland, Oregon, in calling attention to the special examinations held the latter part of March for forest assistant and grazing assistant throughout the western States.

"The spread of the forestry idea throughout the United States during the past few years," said Mr. Cecil, "has been most marked. The creation of two new forest experiment stations by the federal government during the past year and the introduction of bills in Congress for several more stations, as well as the widespread interest being manifested in the two general forestry bills now before Congress, are an indication that the country as a whole is realizing the seriousness of the forest problems of the country.

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FIGHT IS CONTINUED

Although the Agricultural Appropriation bill which recently passed the House of Representatives, did not carry an appropriation for the establishment of a Forest Experiment Station in the Lake States and since the bill to establish such a station was killed by the Appropriations Committee, a bill has just been introduced into the Senate by Senator Townsend of Michigan to establish such a station and it is hoped that it will be added to the Agricultural Appropriation bill in the Senate.

Sentiment for the establishment of such a station is keen throughout the Lake States, particularly in Michigan. Numerous civic bodies, trade associations, and agricultural organizations have passed resolutions favoring its establishment. The Northern Hardwood Manufacturers Association composed of Michigan and Wisconsin lumbermen resolved in favor of the bill at its recent meeting. The Michigan Hardwood Manufacturers Association instructed its Forestry Committee to take necessary action in regard to the bill. The entire membership of the Committee has individually expressed itself favorably in regard to it.

In Michigan alone three different lumbermen have made offers of land, the total aggregating over 1,000 acres, to the Government in case a station is established in the State.

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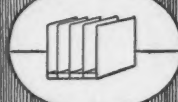
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ROTARY CLUB PLANTERS

The Rotary Club of Lake Charles, Louisiana, for the last two years has had as one of its activities the popular distribution of trees in the city and parish. The first year the club distributed some 350 trees, practically all live oaks. This spring the club distributed about 1300 trees of various species and the movement has met with a great deal of favor.

This practice was inaugurated by R. M. Hereford, chairman of the tree committee both seasons. It is now the intention to install a tree planting nursery of some three or four acres, securing seeds of various shade and nut trees for planting and

also to secure small trees to be planted in the nursery, where they will be permitted to grow large enough for distribution.

FREE GUIDE SERVICE IN PARKS

From the Swiss Alps and the fjords of Norway has come the germ of the nature guide movement which is proving such an attractive feature to the hundreds of thousands of visitors to the National Parks. The first experiments in nature guide work in this country were conducted by the California Fish and Game Commission in Lake Tahoe resorts, California. In 1920 the nature guide service was commenced in Yosemite National Park in co-operation with the National Park Service and proved tremendously popular with visitors. Over 27,000 visitors made use of the service, which is given without charge of any kind. In 1921 the Yosemite Nature Service served over 50,000 visitors and somewhat similar service was furnished visitors in Yellowstone Park. This year the free nature guide service will again be available in Yosemite and Yellowstone Parks and will be installed for the first time in Glacier National Park. The nature guides give lectures and camp fire talks and conduct visitors on nature study field excursions. Anyone puzzled regarding birds, animals, insects, wild flowers, trees, or natural curiosities or features of the parks may obtain information about these without charge by applying to the park nature guides.

PROTECTION WEEK IN PENNSYLVANIA

Governor Sproul, of Pennsylvania, issued a special proclamation urging the observance of Forest Protection Week throughout the state, asking that the "Citizens of the Commonwealth exercise the greatest care with fire in or near woodlands during this period of fire danger; that those citizens whose occupation or movements require the use of fire in the woods take the utmost precaution to prevent the spread of fire; and that every citizen of the state cooperate in eliminating the forest fire evil, to the end that the Commonwealth may enjoy a perpetual forest heritage and all the blessings of prosperity that flow from it."

NO ADVERTISING SIGNS IN CALIFORNIA'S FORESTS

Advertising signs in the 17 National Forests of California have come down, following an order issued by the district forester at San Francisco on January 27. Advertisements printed on rocks and trees are also to be effaced. According to the regulations of the Forest Service of the United States Department of Agriculture, such advertising is prohibited in all National Forests without special permits, which are seldom issued. The object of this regulation is to prevent defacing the mountain landscapes of the National Forests with billboards and other unsightly signs.

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